

SEQUENCE LISTING

<110> Genentech, Inc. Ashkenazi, Avi Botstein, David Desnoyers, Luc Eaton, Dan L. Ferrara, Napoleone Filvaroff, Ellen Fong, Sherman Gao, Wei-Qiang Gerber, Hanspeter Gerritsen, Mary E. Goddard, A. Godowski, Paul J. Grimaldi, Christopher J. Gurney, Austin L. Hillan, Kenneth, J. Kljavin, Ivar J. Mather, Jennie P. Pan, James Paoni, Nicholas F. Roy, Margaret Ann Stewart, Timothy A. Tumas, Daniel Williams, P. Mickey Wood, William, I.

<120> Secreted and Transmembrane Polypeptides and Nucleic Acids Encoding the Same

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<141> 2000-09-18

<150> PCT/US00/04414

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Gln Glu Gln Asp Leu Cys Cys Arg Gly Arg Ala Asp Asp Cys Ala Leu
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Pro	Pro		Leu	Arg	Cys	Ser		His	Ser	Ala	Cys	-	Ser	Gly	Asp
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Glu	Pro	Val	Leu	Val 85	Pro	Glu	Ala	His	Pro 90	Asn	Ala	Ser	Leu	Thr 95	Met
Tyr	Val	Cys	Thr 100	Pro	Val	Pro	His	Pro 105	Asp	Pro	Pro	Met	Ala 110	Leu	Ser
Arg	Thr	Pro 115	Thr	Arg	Gln	Ile	Ser 120	Ser	Ser	Asp	Thr	Asp 125	Pro	Pro	Ala
Asp	Gly 130	Pro	Ser	Asn	Pro	Leu 135	Cys	Cys	Cys	Phe	His 140	Gly	Pro	Ala	Phe
Ser 145	Thr	Leu	Asn	Pro	Val 150		Arg	His	Leu	Phe 155	Pro	Gln	Glu	Ala	Phe 160
Pro	Ala	His	Pro	Ile 165	Tyr	Asp	Leu	Ser	Gln 170	Val	Trp	Ser	Val	Val 175	Ser
Pro	Ala	Pro	Ser 180	Arg	Gly	Gln	Ala	Leu 185	Arg	Arg	Ala	Gln	٠.		
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24

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gaccgaccag ctgagcaggc ggcagatccg cgagtaccaa ctctacagca ggaccagtgg 180
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<213> Homo sapiens
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1	-		•	5					10			•	•	15	
	****	**		i ta i	* ***	e tro	5.4	*,	1 44			e 2		1 2	
Leu	Ile	Leu	Cys	Cys	Gln	Thr	Gln	Tyr	Val	Arg	Asp	-Gln	Gly	Ala	Met
		·	20	,				25					30		
			•												
Thr	Asp	Gln	Leu	Ser	Arg	Arg	Gln	Ile	Arg	Glu	Tyr	Gln	Leu	Tyr	Ser
٠.		35					40					45			
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Arg		Ser	Gly	Lys	His		Gln	Val	Thr	Gly	Arg	Arg	Ile	Ser	Ala
	50					55					60				
			_			_			_	_	<u>.</u> .				_
	Ala	GIu	Asp	GLY		ГÀ2	Phe	Ala	Lys		He	Val	Glu	Thr	
65					70					· 75				•	80
	, 51	ai	·	7	**- 7	.	-1 -	.	ά1		.	a	a1	·	
Thr	Pne	GIY	Ser		vaı	Arg	ттė	гаг	_	Ата	Glu	ser	Glu	_	Tyr
				85					90					95	
Tlo	Crrc	Mot	7 cm	Tira	7.~~	C1	Tira	T 011	T10	C1	Tara	Dwo	Cor.	~1··	T 77.0
116	Cys	met	Asn 100	цуѕ	Arg	GIY	ьys	105	116	GIY	гу	PIO		GIY	гур
•			100				•	103					110		•,
Ser	Tare:	Men	Cys	Val	Dhe	Thr	älu	Tla	Wal	Len	Glu	Agn	Acn	Trzz	Thr
DCI	,	115	Cys	var	1110	1111	120	110	, vai	пси	J.u	125	Abii	1 Y L	1111
							120					120		٠.	
Ala	Phe	Gln	Asn	Ala	Ara	His	Glu	Glv	Tro	р́ће	Met	Ala	Phe	Thr	Ara
	130				5	135		U -1,			140		,		3
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Gln	Gly	Arq	Pro	Arq	Gln	Ala	Ser	Arq	Ser	Arq	Gln	Asn	Gln	Arq	Glu
145	•		•	. ~ .	150		•			155				5	160
			*		4				* .		•				
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	•	100		165					170			,		175	
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His	Ala	Glu	Lys	Gln	Lys	Gln	Phe	Glu	Phe	Val	Gly	Ser	Ala	Pro	Thr
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	•														
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		195	•				200					205			
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	.> 28														
	2 > DN						: .								
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-004	١.			-									à		
<220				·	- 7 t			0					•		
< 2 2 3			iptic nucle				TqT	sequ	ience	:: S]	πυπε	FLTC			
	-	LUUL	エルビエモ	こいしょし	4C DI	. טטכ									

28

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Leu Leu Ala Cys Pro Ser Val Cys Arg Cys Asp Arg Asn Phe Val Tyr
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Cys Asn Glu Arg Ser Leu Thr Ser Val Pro Leu Gly Ile Pro Glu Gly
Val Thr Val Leu Tyr Leu His Asn Asn Gln Ile Asn Asn Ala Gly Phe
Pro Ala Glu Leu His Asn Val Gln Ser Val His Thr Val Tyr Leu Tyr
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Gly Asn Gln Leu Asp Glu Phe Pro Met Asn Leu Pro Lys Asn Val Arg

Val Leu His Leu Gln Glu Asn Asn Ile Gln Thr Ile Ser Arg Ala Ala

125

120

115

Leu Ala Gln Leu Lys Leu Glu Glu Leu His Leu Asp Asp Asn Ser 135 Ile Ser Thr Val Gly Val Glu Asp Gly Ala Phe Arg Glu Ala Ile Ser 145 150 155 Leu Lys Leu Leu Phe Leu Ser Lys Asn His Leu Ser Ser Val Pro Val 170 Gly Leu Pro Val Asp Leu Gln Glu Leu Arg Val Asp Glu Asn Arg Ile 180 185 Ala Val Ile Ser Asp Met Ala Phe Gln Asn Leu Thr Ser Leu Glu Arq 200 -Leu Ile Val Asp Gly Asn Leu Leu Thr Asn Lys Gly Ile Ala Glu Gly 215 Thr Phe Ser His Leu Thr Lys Leu Lys Glu Phe Ser Ile Val Arg Asn 225 230 Ser Leu Ser His Pro Pro Pro Asp Leu Pro Gly Thr His Leu Ile Arg 245 250 Leu Tyr Leu Gln Asp Asn Gln Ile Asn His Ile Pro Leu Thr Ala Phe 265 270 Ser Asn Leu Arg Lys Leu Glu Arg Leu Asp Ile Ser Asn Asn Gln Leu 280 Arg Met Leu Thr Gln Gly Val Phe Asp Asn Leu Ser Asn Leu Lys Gln 295 Leu Thr Ala Arg Asn Asn Pro Trp Phe Cys Asp Cys Ser Ile Lys Trp 305 Val Thr Glu Trp Leu Lys Tyr Ile Pro Ser Ser Leu Asn Val Arg Gly Phe Met Cys Gln Gly Pro Glu Gln Val Arg Gly Met Ala Val Arg Glu 340 Leu Asn Met Asn Leu Leu Ser Cys Pro Thr Thr Pro Gly Leu Pro 360 Leu Phe Thr Pro Ala Pro Ser Thr Ala Ser Pro Thr Thr Gln Pro Pro 375 Thr Leu Ser Ile Pro Asn Pro Ser Arg Ser Tyr Thr Pro Pro Thr Pro 385 390 395 400 Thr Thr Ser Lys Leu Pro Thr Ile Pro Asp Trp Asp Gly Arg Glu Arg

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Ala	Tyr 450	Lys	Leu	Thr	Trp	Val 455	Lys	Met	Gly	His	Ser 460	Leu	Val	Gly	Gly
Ile 465	Val	Gln	Glu	Arg	Ile 470	Val	Ser	Gly	Glu	Lys 475	Gln	His	Leu	Ser ,	Leu 480
Val	Asn	Leu	Glu	Pro 485	Arg	Ser	Thr ,	Tyr	Arg 490	Ile	Cys	Leu	Val	Pro 495	Leu
Asp	Ala	Phe	Asn 500	Tyr	Arg	Ala	Val	Glu 505	Asp	Thr	Ile	Cys	Ser 510	Glu	Ala
Thr	Thr	His 515	Ala	Ser	Tyr	Leu	Asn 520	Asn	Gly	Ser		Thr 525	Ala	Ser :	Ser
His	Glu 530	Gln	Thr	Thr		His 535	Ser	Met	Gly	Ser	Pro 540	Phe	Leu	Leu	Ala
Gly 545	Leu	Ile	Gly	Gly	Ala 550	Val	Ile	Phe	Val	Leu 555	Val	Val	Leu	Leu	Ser 560
Val	Phe'	Cys	Trp	His 565	Met	His	Lys	Lys	Gly 570	Ārg	Tyr	Thr	Ser	Gln 575	Lys
Trp	Lys	Tyr	Asn 580	Arg	Gly	Arg	Arg	Lys 585	Asp	Asp	Tyr	Cys	Glu 590	Ala	Gly
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Gln 625	Pro	Ile	Tyr	Thr	Pro 630	Asn	Gly	Gly	Ile	Asn 635	Tyr	Thr	Asp	Cys	His 640
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Ser Ser Cys Glu Asn Lys Arg Ala Asp Leu Val Phe Ile Ile Asp Ser 50 55 60

Ser Arg Ser Val Asn Thr His Asp Tyr Ala Lys Val Lys Glu Phe Ile 65 70 75 80

Val Asp Ile Leu Gln Phe Leu Asp Ile Gly Pro Asp Val Thr Arg Val 85 90 95

Gly Leu Leu Gln Tyr Gly Ser Thr Val Lys Asn Glu Phe Ser Leu Lys 100 105 110

Thr Phe Lys Arg Lys Ser Glu Val Glu Arg Ala Val Lys Arg Met Arg 115 120 125

His Leu Ser Thr Gly Thr Met Thr Gly Leu Ala Ile Gln Tyr Ala Leu 130 135 140

Asn Ile Ala Phe Ser Glu Ala Glu Gly Ala Arg Pro Leu Arg Glu Asn 145 150 155 160

Val Pro Arg Val Ile Met Ile Val Thr Asp Gly Arg Pro Gln Asp Ser 165 170 175

Val Ala Glu Val Ala Ala Lys Ala Arg Asp Thr Gly Ile Leu Ile Phe 180 185 190

Ala Ile Gly Val Gly Gln Val Asp Phe Asn Thr Leu Lys Ser Ile Gly
195 200 205

Ser Glu Pro His Glu Asp His Val Phe Leu Val Ala Asn Phe Ser Gln 210 215 220

Ile Glu Thr Leu Thr Ser Val Phe Gln Lys Lys Leu Cys Thr Ala His

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Lys 225	Ala	His	Asn	Glu	Val 230	Gly	Thr	Ala	Gln	Cys 235	Asn	Val	Thr	Leu	Glu 240
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acceccateg eeggagetge geegagagee eeagggaggt geeatgegga gegggtgtgt 480
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<212> PRT

<213> Homo sapiens

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His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg His Leu Tyr

Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala

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	Ser	Val	Arg	Tyr 100	Leu	Cys	Met	Gly	Ala 105	Asp	Gly	Lys	Met	Gln 110	Gly	Leu	
	Leu	Gln	Tyr 115	Ser	Glu	Glu	Asp	Cys 120	Ala	Phe	Glu	Glu	Glu 125	Ile	Arg	Pro	
	Asp	Gly 130	Tyr	Asn	Val	Tyr	Arg 135	Ser	Glu	Lys	His	Arg 140	Leu	Pro	Val	Ser	
	Leu 145	Ser	Ser	Ala	Lys	Gln 150	Arg	Gln	Leu		Lys 155	Asn	Arg	Gly	Phe	Leu 160	·,
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:	Glu	Asp	Leu	Arg 180	Gly	His	Leu	Glu	Ser 185	Asp	Met	Phe	Ser	Ser 190	Pro	Leu	
	Glu	Thr	Asp 195	Ser	Met	Asp	Pro	Phe 200	Gly	Leu	Val	Thr	Gly 205	Leu	Glu	Ala	
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	atco	egee	cag a	atgg	ctaca	aa t	gtgt	a									26
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getgetgetg egetaeetgg tggtegeeet gggetateat aaggeetatg ggttttetge 180
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25

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Ala Cys Lys Thr Pro Lys Lys Thr Val Ser Ser Arg Leu Glu Trp Lys
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Lys Leu Gly Arg Ser Val Ser Phe Val Tyr Tyr Gln Gln Thr Leu Gln 65 70 75 80

Gly Asp Phe Lys Asn Arg Ala Glu Met Ile Asp Phe Asn Ile Arg Ile 85 90 95

Lys Asn Val Thr Arg Ser Asp Ala Gly Lys Tyr Arg Cys Glu Val Ser 100 105 110

Ala Pro Ser Glu Gln Gly Gln Asn Leu Glu Glu Asp Thr Val Thr Leu 115 120 125

Glu Val Leu Val Ala Pro Ala Val Pro Ser Cys Glu Val Pro Ser Ser 130 135 140

Ala Leu Ser Gly Thr Val Val Glu Leu Arg Cys Gln Asp Lys Glu Gly
145 150 155 160

Asn Pro Ala Pro Glu Tyr Thr Trp Phe Lys Asp Gly Ile Arg Leu Leu 165 170 175

Glu Asn Pro Arg Leu Gly Ser Gln Ser Thr Asn Ser Ser Tyr Thr Met 180 185 190

Asn Thr Lys Thr Gly Thr Leu Gln Phe Asn Thr Val Ser Lys Leu Asp 195 200 205

Thr Gly Glu Tyr Ser Cys Glu Ala Arg Asn Ser Val Gly Tyr Arg Arg 210 215 220

Cys Pro Gly Lys Arg Met Gln Val Asp Asp Leu Asn Ile Ser Gly Ile 225 230 235 240

Ile Ala Ala Val Val Val Ala Leu Val Ile Ser Val Cys Gly Leu
245 250 255

Gly Val Cys Tyr Ala Gln Arg Lys Gly Tyr Phe Ser Lys Glu Thr Ser 260 265 270

Phe Gln Lys Ser Asn Ser Ser Ser Lys Ala Thr Thr Met Ser Glu Asn 275 280 285

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<213> Homo sapiens
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<213> Homo sapiens

<400> 69

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Cys Thr Cys Glu Ile Arg Pro Trp Phe Thr Pro Arg Ser Ile Tyr Met
35 40 45

Glu Ala Ser Thr Val Asp Cys Asn Asp Leu Gly Leu Leu Thr Phe Pro 50 55 60

<211> 708

<212> PRT

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Glu Ser Leu Met Leu Asn Ser Asn Ala Leu Ser Ala Leu Tyr His Gly

345

340

Thr Ile Glu Ser Leu Pro Asn Leu Lys Glu Ile Ser Ile His Ser Asn 360 365 Pro Ile Arg Cys Asp Cys Val Ile Arg Trp Met Asn Met Asn Lys Thr Asn Ile Arg Phe Met Glu Pro Asp Ser Leu Phe Cys Val Asp Pro Pro 395 390 'Glu Phe Gln Gly Gln Asn Val Arg Gln Val His Phe Arg Asp Met Met 410 Glu Ile Cys Leu Pro Leu Ile Ala Pro Glu Ser Phe Pro Ser Asn Leu 420 425 Asn Val Glu Ala Gly Ser Tyr Val Ser Phe His Cys Arg Ala Thr Ala 440 Glu Pro Gln Pro Glu Ile Tyr Trp Ile Thr Pro Ser Gly Gln Lys Leu Leu Pro Asn Thr Leu Thr Asp Lys Phe Tyr Val His Ser Glu Gly Thr 470 475 Leu Asp Ile Asn Gly Val Thr Pro Lys Glu Gly Gly Leu Tyr Thr Cys 485 490 Ile Ala Thr Asn Leu Val Gly Ala Asp Leu Lys Ser Val Met Ile Lys 500 505 Val Asp Gly Ser Phe Pro Gln Asp Asn Asn Gly Ser Leu Asn Ile Lys 520 Ile Arq Asp Ile Gln Ala Asn Ser Val Leu Val Ser Trp Lys Ala Ser 535 Ser Lys Ile Leu Lys Ser Ser Val Lys Trp Thr Ala Phe Val Lys Thr 545 550 Glu Asn Ser His Ala Ala Gln Ser Ala Arg Ile Pro Ser Asp Val Lys 570 Val Tyr Asn Leu Thr His Leu Asn Pro Ser Thr Glu Tyr Lys Ile Cys Ile Asp Ile Pro Thr Ile Tyr Gln Lys Asn Arg Lys Lys Cys Val Asn

600

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<213> Homo sapiens

<400> 71

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                                                        655
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            660
                                665
Leu Gly Glu Leu Tyr Pro Pro Leu Ile Asn Leu Trp Glu Ala Gly Lys
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tetteeteet gaaacagtet taetgtatet ggaeteeaat eagateacat etatteecaa 420
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Phe Tyr Asn Ala Val Ser Leu His Met Glu Asn Asn Gly Leu His Glu 85 90 95

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Ser Lys Asn Ser Thr Gly Leu Ala Glu Thr Gly Thr His Ser Asn Ser 595 600 605

Tyr Leu Asp Thr Ser Arg Val Ser Ile Ser Val Leu Val Pro Gly Leu 610 615 620

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Pro Pro Pro Gln Ser Ser Pro Pro Pro Gln Pro His Pro Cys His Thr
35 40 45

Cys Arg Gly Leu Val Asp Ser Phe Asn Lys Gly Leu Glu Arg Thr Ile 50 55 60

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- Ser Lys Tyr Lys Asp Ser Glu Thr Arg Leu Val Glu Val Leu Glu Gly
 85 90 95
- Val Cys Ser Lys Ser Asp Phe Glu Cys His Arg Leu Leu Glu Leu Ser 100 105 110
- Glu Glu Leu Val Glu Ser Trp Trp Phe His Lys Gln Gln Glu Ala Pro 115 120 125
- Asp Leu Phe Gln Trp Leu Cys Ser Asp Ser Leu Lys Leu Cys Cys Pro 130 135 140
- Ala Gly Thr Phe Gly Pro Ser Cys Leu Pro Cys Pro Gly Gly Thr Glu
 145 150 155 160
- Arg Pro Cys Gly Gly Tyr Gly Gln Cys Glu Gly Glu Gly Thr Arg Gly 165 170 175
- Gly Ser Gly His Cys Asp Cys Gln Ala Gly Tyr Gly Glu Ala Cys 180 185 190
- Gly Gln Cys Gly Leu Gly Tyr Phe Glu Ala Glu Arg Asn Ala Ser His 195 200 205
- Leu Val Cys Ser Ala Cys Phe Gly Pro Cys Ala Arg Cys Ser Gly Pro 210 215 220
- Glu Glu Ser Asn Cys Leu Gln Cys Lys Lys Gly Trp Ala Leu His His 225 230 235 240
- Leu Lys Cys Val Asp Ile Asp Glu Cys Gly Thr Glu Gly Ala Asn Cys 245 250 255
- Gly Ala Asp Gln Phe Cys Val Asn Thr Glu Gly Ser Tyr Glu Cys Arg 260 265 270
- Asp Cys Ala Lys Ala Cys Leu Gly Cys Met Gly Ala Gly Pro Gly Arg 275 280 285
- Cys Lys Lys Cys Ser Pro Gly Tyr Gln Gln Val Gly Ser Lys Cys Leu 290 295 300
- Asp Val Asp Glu Cys Glu Thr Glu Val Cys Pro Gly Glu Asn Lys Gln 305 310 315 320
- Cys Glu Asn Thr Glu Gly Gly Tyr Arg Cys Ile Cys Ala Glu Gly Tyr 325 330 335
- Lys Gln Met Glu Gly Ile Cys Val Lys Glu Gln Ile Pro Glu Ser Ala 340 345 350

Gly P		ne Ser	Glu	Met	Thr	Glu 360	Asp	Glu.	Leu	Val	Val 365	Leu	Gln	Gln	
	he Pl 70	ne Gly	Ile	Ile	Ile 375		Ala	Leu	Ala	Thr 380	Leu	Ala	Ala	Lys	
Gly A 385	sp Le	eu Val	Phe	Thr 390	Ala	Ile	Phe	Ile	Gly 395	Ala	Val	Ala	Ala	Met 400	
Thr G	lу ту	r Trp	Leu 405	Ser	Glu	Arg	Ser	Asp 410	Arg	Val	Leu	Glu	Gly 415	Phe	
Ile L	ys Gl	y Arg 420		•				•				·			•
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geggetette caggageegg teeccaagge egegetgeac aggeaeggge ggetgteece 480
gegeagegee egggeeeggg tgaeegtega gtggetgege gteegegaeg aeggeteeaa 540
ecgeacetee eteategact ecaggetggt gteegteeac gagagegget ggaaggeett 600
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ggteegettt geetegeagg gggegeeage egggettggg gageeceage tggagetgea 780
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acctgaggge agaaageeea ntgtgteatt gtttacttgt cetgteactg.gatetggget 1500
aaagteetee accaccacte tggacctaag acctggggtt aagtgtgggt tgtgcatcce 1560.
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Arg Gln Leu Gln Leu Lys Glu Val Pro Thr Leu Asp Arg Ala Asp Met
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- Glu Glu Leu Val Ile Pro Thr His Val Arg Ala Gln Tyr Val Ala Leu 50 55 60
- Leu Gln Arg Ser His Gly Asp Arg Ser Arg Gly Lys Arg Phe Ser Gln 65 70 75 80
- Ser Phe Arg Glu Val Ala Gly Arg Phe Leu Ala Leu Glu Ala Ser Thr 85 90 95
- His Leu Leu Val Phe Gly Met Glu Gln Arg Leu Pro Pro Asn Ser Glu 100 105 110
- Leu Val Gln Ala Val Leu Arg Leu Phe Gln Glu Pro Val Pro Lys Ala 115 120 125
- Ala Leu His Arg His Gly Arg Leu Ser Pro Arg Ser Ala Arg Ala Arg 130 135 140
- Val Thr Val Glu Trp Leu Arg Val Arg Asp Asp Gly Ser Asn Arg Thr 145 150 155 160
- Ser Leu Ile Asp Ser Arg Leu Val Ser Val His Glu Ser Gly Trp Lys 165 170 175
- Ala Phe Asp Val Thr Glu Ala Val Asn Phe Trp Gln Gln Leu Ser Arg 180 185 190
- Pro Arg Gln Pro Leu Leu Leu Gln Val Ser Val Gln Arg Glu His Leu 195 200 205
- Gly Pro Leu Ala Ser Gly Ala His Lys Leu Val Arg Phe Ala Ser Gln 210 215 220
- Gly Ala Pro Ala Gly Leu Gly Glu Pro Gln Leu Glu Leu His Thr Leu225230235240
- Asp Leu Gly Asp Tyr Gly Ala Gln Gly Asp Cys Asp Pro Glu Ala Pro 245 250 255
- Met Thr Glu Gly Thr Arg Cys Cys Arg Gln Glu Met Tyr Ile Asp Leu 260 265 270
- Gln Gly Met Lys Trp Ala Glu Asn Trp Val Leu Glu Pro Pro Gly Phe 275 280 285
- Leu Ala Tyr Glu Cys Val Gly Thr Cys Arg Gln Pro Pro Glu Ala Leu 290 295 300
- Ala Phe Lys Trp Pro Phe Leu Gly Pro Arg Gln Cys Ile Ala Ser Glu 305 310 315 320
- Thr Asp Ser Leu Pro Met Ile Val Ser Ile Lys Glu Gly Gly Arg Thr 325 330 335

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Arg Pro Gln Val Val Ser Leu Pro Asn Met Arg Val Gln Lys Cys Ser
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                                   345
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   actgggacat acacttgtat ggtctctgag gaaggcggca acagctatgg ggaggtcaag 420
   gtcaagetca tegtgettgt geetceatee aageetacag ttaacateee etectetgee 480
   accattggga accgggcagt gctgacatgc tcagaacaag atggttcccc accttctgaa 540
   tacacctggt tcaaagatgg gatagtgatg cctacgaatc ccaaaagcac ccgtgccttc 600
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 cagaggetga ggeaggegga teacetgagg tegggagtte gggateagee tgaccaacat 1740
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 <213> Homo sapiens
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Ser Ser Glu Pro Glu Val Arg Ile Pro Glu Asn Asn Pro Val Lys Leu
                                                 45
Ser Cys Ala Tyr Ser Gly Phe Ser Ser Pro Arg Val Glu Trp Lys Phe
                                             60
Asp Gln Gly Asp Thr Thr Arg Leu Val Cys Tyr Asn Asn Lys Ile Thr
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Ala Ser Tyr Glu Asp Arg Val Thr Phe Leu Pro Thr Gly Ile Thr Phe

90

Lys	Ser	Val	Thr 100	Arg	Glu	Asp	Thr	Gly 105	Thr	Tyr	Thr	Cys	Met 110	Val	Ser	
Glu	Glu	Gly 115	Gly	Asn	Ser	Tyr	Gly 120	Glu	Val	Lys	Val	Lys 125	Leu	Ile	Val	
Leu	Val 130	Pro	Pro	Ser	Lys	Pro 135	Thr	Val	Asn	Ile	Pro 140		Ser	Ala	Thr	
Ile 145	Glý	Asn	Arg	Ala	Val 150	Leu	Thr	Cys	Ser	Glu 155	Gln	Asp	Gly	Ser	Pro 160	*
Pro	Ser	Glu	Tyr	Thr 165	Trp	Phe	Lys	Aşp	Gly 170	Ile	Val	Met	Pro	Thr 175	Asn	·
Pro	Lys	Ser	Thr 180	Arg	Ala	Phe	Ser	Asn 185	Ser	Ser	Tyr	Val	Leu 190	Asn	Pro	
Thr	Thr	Gly 195	Glu	Leu	Val	Phe	Asp 200	Pro	Leu	Ser	Ala	Ser 205		Thr	Gly	
Glu	Tyr 210	Ser	Cys	Glu	Ala	Arg 215	Asn	Gly	Tyr	Gly	Thr 220	Pro	Met	Thr	Ser	
Asn 225	Ala	Val	Arg	Met	Glu 230	Ala	Val	Glu	Arg	Asn 235		Gly	Val	Ile	Val 240	<i>;</i>
Ala	Ala	Val	Leu	Val 245	Thr	Leu	Ile	Leu	Leu 250	Gly	Ile	Leu	Val	Phe 255	Gly	
Ile	Trp	Phe	Ala 260	Tyr	Ser	Arg	Gly	His 265	Phe	Asp	Arg	Thr	Lys 270	ŗλε	Gly	
Thr	Ser	Ser 275		Lys	Val	Ile	Tyr 280	Ser	Gln	Pro	Ser	Ala 285	Arg	Ser	Glu	
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)> 12 l> 50						•			,	•.					

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oligonucleotide probe

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geetggagge egeegegage eegettteea eeeegaeete tgeecaggee geaggeecea 180
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                                 25
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Ala Ala Ala Ser Pro Leu Ser Thr Pro Thr Ser Ala Gln Ala Ala Gly
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Pro Ser Ser Gly Ser Cys Pro Pro Thr Lys Phe Gln Cys Arg Thr Ser
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Gly Leu Cys Val Pro Leu Thr Trp Arg Cys Asp Arg Asp Leu Asp Cys
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 65
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Ser Asp Gly Ser Asp Glu Glu Glu Cys Arg Ile Glu Pro Cys Thr Gln 85 90 95

Lys Gly Gln Cys Pro Pro Pro Pro Gly Leu Pro Cys Pro Cys Thr Gly
100 105 110

Val Ser Asp Cys Ser Gly Gly Thr Asp Lys Lys Leu Arg Asn Cys Ser 115 120 125

Arg Leu Ala Cys Leu Ala Gly Glu Leu Arg Cys Thr Leu Ser Asp Asp 130 135 140

Cys Ile Pro Leu Thr Trp Arg Cys Asp Gly His Pro Asp Cys Pro Asp 145 150 155 160

Ser Ser Asp Glu Leu Gly Cys Gly Thr Asn Glu Ile Leu Pro Glu Gly 165 170 175

Asp Ala Thr Thr Met Gly Pro Pro Val Thr Leu Glu Ser Val Thr Ser 180 185 190

Leu Arg Asn Ala Thr Thr Met Gly Pro Pro Val Thr Leu Glu Ser Val
195 200 205

Pro Ser Val Gly Asn Ala Thr Ser Ser Ser Ala Gly Asp Gln Ser Gly 210 215 220

Ser Pro Thr Ala Tyr Gly Val Ile Ala Ala Ala Ala Val Leu Ser Ala 225 230 235 240

Ser Leu Val Thr Ala Thr Leu Leu Leu Leu Ser Trp Leu Arg Ala Gln 245 250 255

Glu Arg Leu Arg Pro Leu Gly Leu Leu Val Ala Met Lys Glu Ser Leu 260 265 270

Leu Leu Ser Glu Gln Lys Thr Ser Leu Pro 275 280

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<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic oligonucleotide probe

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Asn Gly Phe Arg Thr Pro Ser Gly Gly Val Phe Phe Glu Gly Ser Val
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Asn Met Lys Asn Asn Phe Ile Cys Lys Tyr Ser Asp Glu Lys Pro Ala 180 185 190

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Asn Pro Ser Glu Ser Gly Phe Val Thr Leu Val Ser Val Glu Ser Gly 340 345 350

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Pro Pro Ala Glu Lys Glu Gln Lys Val Leu Ile Gln Ser Val Ser Cys

Thr Gly Thr Glu Asp Thr Leu Ala Gln Cys Glu Gln Glu Glu Val Tyr 110 100

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Ser Ser Phe Ser Pro Val Pro Glu Gly Val Arg Leu Ala Asp Gly Pro 130 135 140

Gly His Cys Lys Gly Arg Val Glu Val Lys His Gln Asn Gln Trp Tyr 145 150 155 160

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Arg Gln Leu Gly Cys Gly Arg Ala Val Leu Thr Gln Lys Arg Cys Asn 180 185 190

Lys His Ala Tyr Gly Arg Lys Pro Ile Trp Leu Ser Gln Met Ser Cys 195 200 205

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Leu Glu Val Leu His Lys Gly Val Trp Gly Ser Val Cys Asp Asp Asn 260 265 270

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Val Gly Arg Ile Trp Leu Asp Asn Val Arg Cys Ser Gly Glu Gln 305 310 315 320

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Gly Arg Leu Thr Ala Tyr Glu Phe Ala Lys Leu Lys Ser Lys Leu Val 50 55 60

Leu Trp Asp Ile Asn Lys His Gly Leu Glu Glu Thr Ala Ala Lys Cys 65 70 75 80

Lys Gly Leu Gly Ala Lys Val His Thr Phe Val Val Asp Cys Ser Asn 85 90 95

Arg Glu Asp Ile Tyr Ser Ser Ala Lys Lys Val Lys Ala Glu Ile Gly
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Asp Val Ser Ile Leu Val Asn Asn Ala Gly Val Val Tyr Thr Ser Asp 115 120 125

Leu Phe Ala Thr Gln Asp Pro Gln Ile Glu Lys Thr Phe Glu Val Asn 130 135 140

Val Leu Ala His Phe Trp Thr Thr Lys Ala Phe Leu Pro Ala Met Thr 145 150 155 160

Lys Asn Asn His Gly His Ile Val Thr Val Ala Ser Ala Ala Gly His 165 170 175

Val Ser Val Pro Phe Leu Leu Ala Tyr Cys Ser Ser Lys Phe Ala Ala 180 185 190

Val Gly Phe His Lys Thr Leu Thr Asp Glu Leu Ala Ala Leu Gln Ile 195 200 205

Thr Gly Val Lys Thr Thr Cys Leu Cys Pro Asn Phe Val Asn Thr Gly 210 215 220

Phe Ile Lys Asn Pro Ser Thr Ser Leu Gly Pro Thr Leu Glu Pro Glu 225 230 235 240

Glu Val Val Asn Arg Leu Met His Gly Ile Leu Thr Glu Gln Lys Met 245 250 255

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Pro Phe Pro Gly Leu Asn Met Lys Ser Tyr Ala Gly Phe Leu Thr Val

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Thr 145	Leu	Ser	Met	Leu	Ту <u>г</u> 150	Ile	Asp ·	Asn	Pro	Val 155	Gly	Thr	Gly	Phe	Ser 160
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His His Pro Pro Asp Asp Ser Ala Leu Cys Ala Phe Pro Ile Arg Ala 405 410 415

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Phe Leu Arg Asp His Leu Arg Cys Leu His Val Lys Phe Thr Asp Val 180 185 190

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Val Pro Val Phe Glu Ser Ser Ser Ser Thr Leu Thr Phe Gln Ile Val 115 120 125

Thr Asp Ser Ala Arg Ile Gln Arg Thr Val Phe Val Phe Tyr Tyr Phe 130 135 140

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585

565

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- Glu Lys Ile Pro Lys Tyr Val Glu Phe Met Lys Asp Asn Tyr Pro Pro 85 90 95
- Ser Phe Lys Tyr Glu Asp Phe Gly Pro Leu Phe Thr Ala Lys Phe Phe 100 105 110
- Asn Ala Asn Gln Trp Ala Asp Ile Phe Gln Ala Ser Gly Ala Lys Tyr 115 120 125
- Ile Val Leu Thr Ser Lys His His Glu Gly Phe Thr Leu Trp Gly Ser 130 135 140
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Val Leu Ile Trp Lys Val Pro Val Ser Arg Gln Phe Ala Ala Tyr Cys
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Thr Thr Lys Asp Pro Ile Phe Asn Thr Gln Thr Ala Thr Gln Thr Thr 150 155 145 Glu Phe Ile Val Ser Asp Ser Thr Tyr Ser Val Ala Ser Pro Tyr Ser 165 170 Thr Ile Pro Ala Pro Thr Thr Pro Pro Ala Pro Ala Ser Thr Ser 185 Ile Pro Arg Arg Lys Lys Leu Ile Cys Val Thr Glu Val Phe Met Glu 195 200 Thr Ser Thr Met Ser Thr Glu Thr Glu Pro Phe Val Glu Asn Lys Ala Ala Phe Lys Asn Glu Ala Ala Gly Phe Gly Gly Val Pro Thr Ala Leu 225 230 235 Leu Val Leu Ala Leu Leu Phe Phe Gly Ala Ala Gly Leu Gly Phe 245 Cys Tyr Val Lys Arg Tyr Val Lys Ala Phe Pro Phe Thr Asn Lys Asn 265 Gln Gln Lys Glu Met Ile Glu Thr Lys Val Val Lys Glu Glu Lys Ala 285 275 Asn Asp Ser Asn Pro Asn Glu Glu Ser Lys Lys Thr Asp Lys Asn Pro 295 Glu Glu Ser Lys Ser Pro Ser Lys Thr Thr Val Arg Cys Leu Glu Ala 315 305 Glu Val

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<211> 24

<212> DNA

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<220>

<223> Description of Artificial Sequence: Synthetic oligonucleotide probe

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<210> 203

<211> 22

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<213> Artificial Sequence

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<211> 1620
<212> DNA
<213> Homo sapiens
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<223> a, t, c or g
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<221> modified_base
<222> (977)
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<222> (1003)

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Lys Val Asp Val Gly Arg Tyr Thr Asp Val Ser Thr Arg Tyr Lys Val 195 200 205

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<212> DNA

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Gln Asn Leu Gly Asn Gly His Gly Lys Asp Leu Leu Asn Gly Val Lys
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Ser Val Ile Leu Pro Cys Arg Tyr Arg Tyr Glu Pro Ala Leu Val Ser
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Gly	Val	Arg	Ser	Tyr 245	Gly	Pro	Arg	His	Arg 250	Arg	Leu	His	Arg	Tyr 255	Asp
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Phe 305	His	Gly	Leu	Asp	Arg 310	Cys	Asp	Ala	Gly	Trp 315	Leu	Ala	Asp	Gly	Ser 320
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Thr Gly Lys Arg Leu Lys Lys Thr Pro Glu Lys Lys Thr Gly Asn Lys 145 150 155 160

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<212> PRT

<213> Homo Sapien

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35 40 45

Cys Ala His Pro Leu Ala Thr Leu Phe Lys Ile Leu Ala Ser Phe 50 55 60

Tyr Ile Ser Leu Val Ile Phe Tyr Gly Leu Ile Cys Met Tyr Thr
65 70 75

Leu Trp Trp Met Leu Arg Arg Ser Leu Lys Lys Tyr Ser Phe Glu 80 85 90

Ser Ile Arg Glu Glu Ser Ser Tyr Ser Asp Ile Pro Asp Val Lys

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Leu	Tyr	Ser	Lys	Arg 125	Phe	Ala	Val	Phe	Leu 130	Ser	Glu	Val	Ser	Glu 135
Asn	Lys	Leu	Arg	Gln 140	Leu	Asn	Leu	Asn	Asn 145	Glu	Trp	Thr	Leu	Asp 150
Lys	Leu	Arg	Gln	Arg 155	Leu	Thr	Lys	Asn	Ala 160	Gln	Asp	Lys		Glu 165
Leu	His	Leu	Phe	Met 170	Leu	Ser	Gly	Ile	Pro 175	Asp	Thr	Val	Phe	Asp 180
Leu	Val	Glu	Leu	Glu 185	Val	Leu	Lys	Leu	Glu 190	Leu	Ile	Pro	Asp	Val 195
Thr	Ile	Pro	Pro	Ser 200	Ile	Ala	Gln	Leu	Thr 205	Gly	Leu	Lys	Glu	Leu 210
Trp	Leu	Tyr	His	Thr 215	Ala	Ala	Lys	Ile	Glu 220	Ala	Pro	Ala	Leu	Ala 225
Phe	Leų	Arg	Glu	Asn 230	Leu	Arg	Ala	Leu	His 235	Ile	Lys	Phe	Thr	Asp 240
Ile	Lys	Glu	Ile	Pro 245	Leu	Trp	Ile	Tyr	Ser 250	Leu	Lys	Thr	Leu	Glu 255
Glu	Leu	His	Leu	Thr 260	Gly	Asn	Leu	Ser	Ala 265	Glu	Asn	Asn	Arg	Tyr 270
Ile	Val	Ile	Asp	Gly 275	Leu	Arg	Glu	Leu	Lys 280	Arg	Leu	Lys	Val	Leu 285
Arg	Leu	Lys	Ser		Leu	Ser	Lys	Leu		Gln	Val	Val	Thr	
Val	Gly	Val	His		Gln	Lys	Leu	Ser		Asn	Asn	Glu	Gly	
Lvs	Len	Tle	Val	305 Leu	Asn	Ser	Leu	Lvs	310	Met	Ala	Asn	Leu	315 Thr
_				320					325					330
Glu	Leu	Glu	Leu	11e 335	Arg	Cys	Asp	Leu	Glu 340	Arg	Ile	Pro	His	Ser 345
Île	Phe	Ser	Leu	His	Asn	Leu	Gln	Glu	Ile 355	Asp	Leu	Lys	Asp	Asn 360

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Pro I	lle	Gln	Ile	Gly 395		Leu	Thr	Asn	Leu 400	Glu	Arg	Leu	Tyr	Leu 405
Asn A	Arg	Asn	Lys	Ile 410	Glu	Lys	Ile	Pro	Thr 415	Gln	Leu	Phe	Tyr	Cys 420
Arg I	ъys	Leu	Arg	Tyr 425	Leu	Asp	Leu	Ser	His 430	Asn	Asn	Leu	Thr	Phe 435
Leu I	Pro	Ala	Asp	Ile 440	Gly	Leu	Leu	Gln	Asn 445	Leu	Gln	Asn	Leu	Ala 450
Ile 1	Chr	Ala	Asn	Arg 455	Ile	Glu	Thr	Leu	Pro 460	Pro	Glu	Leu	Phe	Gln 465
Cys I	Arg	Lys	Leu	Arg 470	Ala	Leu	His	Leu	Gly 475	Asn	Asn	Val	·Leu	Gln 480
Ser I	Leu	Pro	Ser	Arg 485	Val	Gly	Glu	Leu	Thr 490	Asn	Leu	Thr	Gln	Ile 495
Glu I	Leu	Arg	Gly	Asn 500	Arg	Leu	Glu	Cys	Leu 505	Pro	Val	Glu	Leu	Gly 510
Glu (Cys	Pro	Leu	Leu 515	Lys	Arg	Ser	Gly	Leu 520	Val	Val	Glu		Asp 525
Leu I	Phe	Asn	Thr	Leu 530	Pro	Pro	Glu	Val	Lys 535	Glu	Arg	Leu	Trp	Arg 540
Ala A	Asp	Lys	Ģlu	Gln 545	Ala							•	÷	
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 tgaacgcagg agctgtcatt gactggccca cagaggaggg caaggaagta 150
 tgggattatg tgacggtccg caaggatgcc tacatgttct ggtggctcta 200
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<211> 452

<212> PRT

<213> Homo Sapien

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Trp Pro Thr Glu Glu Gly Lys Glu Val Trp Asp Tyr Val Thr Val

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Ser	Cys	Lys	Asn	Phe 65	Ser	Glu	Leu	Pro	Leu 70	Väl	Met	Trp	Leu	Gln 75
Gly	Gly	Pro	Gly	Gly 80	Ser	Ser	Thr	Gly	Phe 85	Gly	Asn	Phe	Glu	Glu 90
Ile	Gly	Pro	Leu	Asp 95	Ser	Asp	Leu	Lys	Pro 100	Arg	Lys	Thr	Thr	Trp 105
Leu	Gln	Ala	Ala	Ser 110	Leu	Leu	Phe	Val	Asp 115	Asn	Pro	Val	Gly	Thr 120
Gly	Phe	Ser	Tyr	Val 125	Asn	Gly	Ser	Gly	Ala 130	Tyr	Ala	Lys	Asp	Leu 135
Ala	Met	Val	Ala	Ser 140	Asp	Met	Met	Val	Leu 145	Leu	Lys	Thr	Phe	Phe 150
Ser	Cys	His	Lys	Glu 155	Phe	Gln	Thr	Val	Pro 160	Phe	Tyr	Ile	Phe	Ser 165
Glu	Ser	Tyr	Gly	Gly 170	Lys	Met	Ala	Ala	Gly 175	Ile	Gly	Leu	Glu	Leu 180
Tyr	Lys	Ala	Ile	Gln 185	Arg	Gly	Thr	Ile	Lys 190	Cys	Asn	Phe	Ala	Gly 195
Val	Ala	Leu	Gly	Asp 200	Ser	Trp	Ile	Ser	Pro 205	Val	Asp	Ser	Val	Leu 210
Ser	Trp	Gly	Pro	Tyr 215	Leu	Tyr	Ser	Met	Ser 220	Leu	Leu	Glu	Asp	Lys 225
Gly	Leu	Ala	Glu	Val 230	Ser	Lys	Val	Ala	Glu 235	Gln	Val	Leu	Asn	Ala 240
Val	Asn	Lys,	Gly	Leu 245	Tyr	Arg	Glu	Ala	Thr 250	Glu	Leu	Trp	Gly	Lys 255
Ala	Glu	Met	Ile	Ile 260	Glu	Gln	Asn	Thr	Asp 265	Gly	Val	Asn	Phe	Tyr 270
Asn	Ile	Leu	Thr	Lys 275	Ser	Thr	Pro	Thr	Ser 280	Thr	Met	Glu	Ser	Ser 285
Leu	Glu	Phe	Thr	Gln 290	Ser	His	Leu	Val	Cys 295	Leu	Cys	Gln	Arg	His 300
	-		- -5	~1	3	3	77-	T	0	a 1	T	1/	7 ~~	~1

<213> Homo Sapien

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Gly	Gly	Gln	Ala	Thr 335	Asn	Val	Phẹ	Val	Asn 340	Met	Glu	Glu	Asp	Phe 345
Met	Lys	Pro	Val	Ile 350	Ser	Ile	Val	Asp	Glu 355	Leu	Leu	Glu	Ala	Gly 360
Ile	Asn	Val	Thr	Val 365	Tyr	Asn	Gly	Gln	Leu 370	Asp	Leu	Ile	Val	Asp 375
Thr	Met	Gly	Gln	Glu 380	Ala	Trp	Val	Arg	Lys 385	Leu	Lys	Trp	Pro	Glu 390
Leu	Pro	Lys	Phe	Ser 395	Gln	Leu	Lys	Trp	Lys 400	Ala	Leu	Tyr	Ser	Asp 405
Pro	Lys	Ser	Leu	Glu 410	Thr	Ser	Ala	Phe	Val 415	Lys	Ser	Tyr	Lys	Asn 420
Leu	Ala	Phe	Tyr	Trp 425	Ile	Leu	Lys	Ala	Gly 430	His	Met	Val	Pro	Ser 435
Asp	Gln	Gly	Asp	Met 440	Ala	Leu	Lys	Met	Met 445	Arg	Leu	Val	Thr	Gln 450
Gln	Glu	•												
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Gly Pro Cys Gly Arg Arg Val Ile Thr Ser Arg Ile Val Gly Gly
35 40 45

Glu Asp Ala Glu Leu Gly Arg Trp Pro Trp Gln Gly Ser Leu Arg
50 55 60

Leu Trp Asp Ser His Val Cys Gly Val Ser Leu Leu Ser His Arg
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Trp Ala Leu Thr Ala Ala His Cys Phe Glu Thr Tyr Ser Asp Leu
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<210> 257

<211> 314

<212> PRT

<213> Homo Sapien

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Val	Ser	Asn	Ile	Tyr 125	Leu	Ser	Pro	Arg	Tyr 130	Leu	Glý	Asn	Ser	Pro 135
Tyr	Asp	Ile	Ala	Leu 140	Val	Lys	Leu	Ser	Ala 145	Pro	Val	Thr	Tyr	Thr 150
Lys	His	Ile	Gln	Pro 155	Ile	Cys	Leu	Gln	Ala 160	Ser	Thr	Phe	Glu	Phe 165
Glu	Asn	Arg	Thr	Asp 170	Cys	Trp	Val	Thr	Gly 175	Trp	Gly	Tyr	Ile	Lys 180
Glu	Asp	Glu	Ala	Leu 185	Pro	Ser	Pro	His	Thr 190	Leú	Gln	Glu	Val	Gln 195
Val	Ala	Ile	Ile	Asn 200	Asn	Ser	Met	Cys	Asn 205	His	Leu	Phe	Leu	Lys 210
Tyr	Ser	Phe	Arg	Lys 215	Asp	Ile	Phe	Gly	Asp 220	Met	Val	Cys	Ala	Gly 225
Asn	Ala	Gln	Gly	Gly 230	Lys	Asp	Ala	Cys	Phe 235	Gly	Asp	Ser	Gly	Gly 240
Pro	Leu	Ala	Cys	Asn 245	Lys	Asn	Gly	Leu	Trp 250	Tyr	Gln	Ile	Gly	Val 255
Val	Ser	Trp	Gly	Val 260	Gly	Cys	Gly	Arg	Pro 265	Asn	Arg	Pro	Gly	Val 270
Tyr	Thr	Asn	Ile	Ser 275	His	His	Phe	Glu	Trp 280	Ile	Gln	Lys	Leu	Met 285
Ala	Gln	Ser	Gly	Met 290	Ser	Gln	Pro	Asp	Pro 295	Ser	Trp	Pro	Leu	Leu 300
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<400> 258

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<210> 259

<211> 556

<212> PRT

<213> Homo Sapien

<400> 259

Met Gly Leu Gln Ala Cys Leu Leu Gly Leu Phe Ala Leu Ile Leu
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Glu	Leu	Ser	Leu	Thr 50	Phe	Ala	Leu	Arg	Gln 55	Gln	Asn	Val	Glu	Arg 60
Leu	Ser	Glu	Leu	Val 65	Gln	Ala	Val	Ser	Asp 70	Pro	Ser	Ser	Pro.	Gln 75
Tyr	Gly	Lys	Tyr	Leu 80	Thr	Leu	Glu	Asn	Val 85	Ala	Asp	Leu	Val	Arg 90
Pro	Ser	Pro	Leu	Thr 95	Leu	His	Thr	Val	Gln 100	Lys	Trp	Leu	Leu	Ala 105
Ala	Gly	Ala	Gln	Lys 110	Cys	His	Ser	Val	Ile 115	Thr	Gln	Asp	Phe	Leu 120
Thr	Cys	Trp	Leu	Ser 125	Ile	Arg	Gln	Ala	Glu 130	Leu	Leu	Leu	Pro	Gly 135
Ala	Glu	Phe	His	His 140	Tyr	Val	Gly	Gly	Pro 145	Thr	Glu	Thr	His	Val 150
Val	Arg	Ser	Pro	His 155	Pro	Tyr	Gln	Leu	Pro 160	Gln	Ala	Leu	Ala	Pro 165
His	Val	Asp	Phe	Val 170	Gly	Gly	Leu	His	Arg 175	Phe	Pro	Pro	Thr	Ser 180
Ser	Leu	Arg	Gln	Arg 185	Pro	Glu	Pro	Gln	Val 190	Thr	Gly	Thr	Val	Gly 195
Leu	His	Leu	Gly	Val 200	Thr	Pro	Ser	Val	Ile 205	Arg	.Lys	Arg	Tyr	Asn 210
Leu	Thr	Ser	Gln	Asp 215	Val	Gly	Ser	Gly	Thr 220		Asn	Asn	Ser	Gln 225
Ala	Cys	Ala	Gln	Phe 230		Glu		Tyr	Phe 235	His	Asp	Ser		Leu .240
Ala	Gln	Phe	Met	Arg 245	Leu	Phe	Gly	Gly	Asn 250	Phe	Ala	His	Gln	Ala 255
Ser	Val	Ala	Arg	Val 260	Val	Gly	Gln	Gln	Gly 265	Arg	Gly	Arg	Ala	Gly 270
Ile	Glu	Ala	Ser	Leu 275				Tyr			Ser	Ala	Gly	Ala 285

Asn	Ile	Ser	Thr	Trp 290	Val	Tyr	Ser	Ser	Pro 295	Gly	Arg	His	Glu	Gly 300
Gln	Glu	Pro	Phe	Leu 305	Gln	Trp	Leu	Met	Leu 310	Leu	Ser	Asn	Glu	Ser 315
Ala	Leu	Pro	His	Val 320	His	Thr	Val	Ser	Tyr 325	Gly	Asp	Asp	Glu	Asp 330
Ser	Leu	Ser	Ser	Ala 335	Tyr	Ile	Gln	Arg	Val 340	Asn	Thr	Glu	Leu	Met 345
Lys	Ala	Ala	Ala	Arg 350	Gly	Leu	Thr	Leu	Leu 355	Phe	Ala	Ser	Gly	Asp 360
Ser	Gly	Ala	Gly	Cys 365	Trp	Ser	Val	Ser	Gly 370	Arg	His	Gln	Phe	Arg 375
Pro	Thr	Phe	Pro	Ala 380	Ser	Ser	Pro	Tyr	Val 385	Thr	Thr	Val	Gly	Gly 390
Thr	Ser	Phe	Gln	Glu 395	Pro	Phe	Leu	Ile	Thr 400	Asn	Glu	Ile	Val	Asp 405
Tyr	Ile	Ser	Gly	Gly 410	Gly	Phe	Ser	Asn	Val 415	Phe	Pro	Arg	Pro	Ser 420
Tyr	Gln	Glu	Glu	Ala 425	Val	Thr	Lys	Phe	Leu 430	Ser	Ser	Ser	Pro	His 435
Leu	Pro	Pro	Ser	Ser 440	Tyr	Phe	Asn	Ala	Ser 445	Gly	Arg	Ala	Tyr	Pro 450
Asp	Val	Ala	Ala	Leu 455	Ser	Asp	Gly	Tyr	Trp 460	Val	Val	Ser	Asn	Arg 465
Val	Pro	Ile	Pro	Trp 470	Val	Ser	Gly	Thr	Ser 475	Ala	Ser	Thr	Pro	Val 480
Phe	Gly	Gly	Ile	Leu 485	Ser	Leu	Ile	Asn	Glu 490	His	Arg	Ile	Leu	Ser 495
Gly	Arg	Pro	Pro	Leu 500	Gly	Phe	Leu	Asn	Pro 505	Arg	- Leu	Tyr	Gln	Gln 510
His	Gly	Ala	Gly	Leu 515	Phe	Asp	Val	Thr	Arg 520	Gly	Cys	His	Glu	Ser 525
Cys	Leu	Asp	Glu	Glu 530	Val	Glu	Gly	Gln	Gly 535	Phe	Cys	Ser	Gly	Pro 540
Gly	Trp	Asp	Pro	Val 545	Thr	Gly	Trp	Gly	Thr 550	Pro	Thr	Ser	Gln	Leu 555

Cys

<210> 260 <211> 1638 <212> DNA

<213> Homo Sapien

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ctattggatt aaaggaaact acctggattg tagggagggg tgacacagtg 1250
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tgtgtgtaag gtgtcttata atcttttacc tattcttac aattgcaaga 1400
tgactggctt tactatttga aaactggttt gtgtatcata tcatataca 1450
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tttggggcaa tgaggaatat ttgacaatta agttaatctt cacgtttttg 1550
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atatttggca tacaagagat atgaaaaaaa aaaaaaaa 1638

<210> 261

<211> 383

<212> PRT

<213> Homo Sapien

<400> 261

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Cys Ala Val Gly Gln Val Ser Pro Tyr Ser Ala Pro Trp Lys Pro
20 25 30

Thr Trp Pro Ala Tyr Arg Leu Pro Val Val Leu Pro Gln Ser Thr
35 40 45

Leu Asn Leu Ala Lys Pro Asp Phe Gly Ala Glu Ala Lys Leu Glu
50 55 60

Val Ser Ser Ser Cys Gly Pro Gln Cys His Lys Gly Thr Pro Leu
65 70 75

Pro Thr Tyr Glu Glu Ala Lys Gln Tyr Leu Ser Tyr Glu Thr Leu 80 85 90

Tyr Ala Asn Gly Ser Arg Thr Glu Thr Gln Val Gly Ile Tyr Ile

95 100 105

Leu Ser Ser Ser Gly Asp Gly Ala Gln His Arg Asp Ser Gly Ser 110 115 120

Ser	Gly	Lys	Ser	Arg 125	Arg	Lys	Arg	Gln	Ile 130	Tyr	Gly	Tyr	Asp	Ser 135
Arg	Phe	Ser	Ile	Phe 140	Gly	Lys	Asp	Phe	Leu [*] 145	Leu	Asn	Tyr		Phe 150
Ser	Thr	Ser	Val	Lys 155	Leu	Ser	Thr	Gly	Cys 160	Thr	Gly	Thr	Leu	Val 165
Ala	Glu	Lys	His	Val 170	Leu	Thr	Ala	Ala	His 175	Cys	Ile	His	Asp	Gly 180
Lys	Thr	Tyr	Val	Lys 185	Gly	Thr	Gln	Lys	Leu 190	Arg	Val	Gly	Phe	Leu 195
Lys	Pro	Lys	Phe	Lys 200	Asp	Gly	Gly	Arg	Gly 205	Ala	Asn	Asp	Ser	Thr 210
Ser	Ala	Met	Pro	Glu 215	Gln	Met	Lys	Phe	Gln 220	Trp	Ile	Arg	Val	Lys 225
Arg	Thr	His	Val	Pro 230	Lys	Gly	Trp	Ile	Lys 235	Gly	Asn	Ala	Asn	Asp 240
Ile	Gly	Met	Asp	Tyr 245	Asp	Tyr	Ala	Leu	Leu 250	Glu	Leu	Lys	Lys	Pro 255
His	Lys	Arg	Lys	Phe 260	Met	Lys	Ile	Gly	Val 265	Ser	Pro	Pro	Ala	Lys 270
Gln	Leu	Pro	Gly	Gly 275	Arg	Ile	His	Phe	Ser 280	Gly	Tyr	Asp	Asn	Asp 285
Arg	Pro	Gly	Asn	Leu 290	Val	Tyr	Arg	Phe	Cys 295	Asp	Val	Lys	Asp	Gl·u 300
Thr	Tyr	Asp	Leu	Leu 305	Tyr	Gln	Gln	Cys	Asp 310	Ala	Gln	Pro	Gly	Ala 315
Ser	Gly	Ser	Gly	Val 320	Tyr	Val	Arg	Met	Trp 325	Lys	Arg	Gln	Gln	Gln 330
Lys	Trp	Glu	Arg	Lys 335	Ile	Ile	Gly	Ile	Phe 340	Ser	Gly	His	Gln	Trp 345
Val	Asp	Met	Asn	Gly 350	Ser	Pro	Gln	Asp	Phe 355	Asn	Val	Ala	Val	Arg 360
Ile	Thr	Pro	Leu	Lys 365	Tyr	Ala	Gln	Ile	Cys 370	Tyr	Trp	Ile	Lys	Gly 375
Asn	Tyr	Leu	Asp	Cys 380	Arg	Glu	Gly							

<210> 262 <211> 1378 <212> DNA

<213> Homo Sapien

<400> 262 gcatcgccct gggtctctcg agcctgctgc ctgctccccc gccccaccag 50 ccatggtggt ttctggagcg cccccagccc tgggtggggg ctgtctcggc 100 accttcacct coetgetget getggegteg acagecatec teaatgegge 150 caqqatacct qttcccccag cctgtgggaa gccccagcag ctgaaccggg 200 ttgtgggcgg cgaggacagc actgacagcg agtggccctg gatcgtgagc 250 atccagaaga atgggaccca ccactgcgca ggttctctgc tcaccagccg 300 ctgggtgatc actgctgccc actgtttcaa ggacaacctg aacaaaccat 350 acctgttctc tgtgctgctg ggggcctggc agctggggaa ccctggctct 400 cggtcccaga aggtgggtgt tgcctgggtg gagccccacc ctgtgtattc 450 ctggaaggaa ggtgcctgtg cagacattgc cctggtgcgt ctcgagcgct 500 ccatacagtt ctcagagcgg gtcctgccca tctgcctacc tgatgcctct 550 atccacctcc ctccaaacac ccactgctgg atctcaggct gggggagcat 600 ccaagatgga gttcccttgc cccaccctca gaccctgcag aagctgaagg 650 ttcctatcat cgactcggaa gtctgcagcc atctgtactg gcggggagca 700 ggacagggac ccatcactga ggacatgctg tgtgccggct acttggaggg 750 ggagcgggat gcttgtctgg gcgactccgg gggccccctc atgtgccagg 800 tggacggcgc ctggctgctg gccggcatca tcagctgggg cgagggctgt 850 gccgagcgca acaggcccgg ggtctacatc agcctctctg cgcaccgctc 900 ctgggtggag aagatcgtgc aaggggtgca gctccgcggg cgcgctcagg 950 ggggtggggc cctcagggca ccgagccagg gctctggggc cgccgcgcgc 1000 tectagggeg cagegggaeg egggetegg atetgaaagg eggeeagate 1050 cacatotgga totggatotg cggcggcotc gggcggtttc ccccgccgta 1100 aataggetea tetaceteta eetetggggg eeeggaegge tgetgeggaa 1150 aggaaaccc ctccccgacc cgcccgacgg cctcaggccc ccctccaagg 1200 catcaggece egeceaaegg ceteatgtee eegeceecae gaetteegge 1250 cccgccccg ggcccagcg cttttgtgta tataaatgtt aatgattttt 1300 ataggtattt gtaaccctgc ccacatatct tatttattcc tccaatttca 1350 ataaattatt tattctccaa aaaaaaaa 1378

<210> 263

<211> 317

<212> PRT

<213> Homo Sapien

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Ile Gln Phe Ser Glu Arg Val Leu Pro Ile Cys Leu Pro Asp Ala

Ser Ile His Leu Pro Pro Asn Thr His Cys Trp Ile Ser Gly Trp

170

160

175

165

180

<211> 24

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                                     190
Gln Lys Leu Lys Val Pro Ile Ile Asp Ser Glu Val Cys Ser His
                                     205
                 200
Leu Tyr Trp Arg Gly Ala Gly Gln Gly Pro Ile Thr Glu Asp Met
                 215
Leu Cys Ala Gly Tyr Leu Glu Gly Glu Arg Asp Ala Cys Leu Gly
                 230
                                     235
Asp Ser Gly Gly Pro Leu Met Cys Gln Val Asp Gly Ala Trp Leu
                                     250
Leu Ala Gly Ile Ile Ser Trp Gly Glu Gly Cys Ala Glu Arg Asn
                 260
                                     265
Arg Pro Gly Val Tyr Ile Ser Leu Ser Ala His Arg Ser Trp Val
                 275
Glu Lys Ile Val Gln Gly Val Gln Leu Arg Gly Arg Ala Gln Gly
Gly Gly Ala Leu Arg Ala Pro Ser Gln Gly Ser Gly Ala Ala Ala
                 305
                                     310
Arg Ser
<210> 264
<211> 24
<212> DNA
<213> Artificial Sequence
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<400> 264
gtccgcaagg atgcctacat gttc 24
<210> 265
<211> 19
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gcagaggtgt ctaaggttg 19
<210> 266
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<212> DNA
<213> Artificial Sequence
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<223> Synthetic Oligonucleotide Probe
<400> 266
 agetetagae caatgeeage ttee 24
<210> 267
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<212> DNA
<213> Artificial Sequence
<223> Synthetic Oligonucleotide Probe
 gccaccaact cctgcaagaa cttctcagaa ctgcccctgg tcatg 45
<210> 268
<211> 25
<212> DNA
<213> Artificial Sequence
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<223> Synthetic Oligonucleotide Probe
<400> 268
 ggggaattca ccctatgaca ttgcc 25
<210> 269
<211> 24
<212> DNA
<213> Artificial Sequence
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<210> 270
<211> 50
<212> DNA
<213> Artificial Sequence
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<211> 18
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<213> Artificial Sequence
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<223> Synthetic Oligonucleotide Probe
<400> 272
cagccctgcc acatgtgc 18
<210> 273
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<400> 273
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<211> 24
<212> DNA
<213> Artificial Sequence
<223> Synthetic Oligonucleotide Probe
<400> 274
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<210> 275
<211> 45
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic Oligonucleotide Probe
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<210> 276
<211> 21
<212> DNA
<213> Artificial Sequence
<223> Synthetic Oligonucleotide Probe
<400> 276
gggcagggat tccagggctc c 21
<210> 277
<211> 18
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<400> 277
ggctatgaca gcaggttc 18
<210> 278
<211> 18
<212> DNA
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<400> 278
tgacaatgac cgaccagg 18
<210> 279
<211> 24
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<400> 279
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<210> 280
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<211> 34
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<400> 281
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 tgccaggtgg a 61
<210> 283
<211> 119
<212> DNA
<213> Artificial Sequence
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 atgctgtgtg ccggctact 119
<210> 284
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<213> Homo Sapien
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<212> PRT

<213> Homo Sapien

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Gln Val Ser Pro Thr Ala Ser Asp Met Leu His Met Arg Trp Asp
50 55 60

Glu Glu Leu Ala Ala Phe Ala Lys Ala Tyr Ala Arg Gln Cys Val 65 70 75

Trp Gly His Asn Lys Glu Arg Gly Arg Arg Gly Glu Asn Leu Phe 80 85 90

Ala Ile Thr Asp Glu Gly Met Asp Val Pro Leu Ala Met Glu Glu 95 100 105

Trp His His Glu Arg Glu His Tyr Asn Leu Ser Ala Ala Thr Cys
110 115 120

Ser Pro Gly Gln Met Cys Gly His Tyr Thr Gln Val Val Trp Ala 125 130 135

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Gln	Gly	Val	Glu	Glu 155	Thr	Asn	Ile	Glu	Leu 160	Leu	Val	Cys		Tyr 165
Glu	Pro	Pro	Gly	Asn 170	Val	Lys	Gly	Lys	Arg 175	Pro	Tyr	Gln	Glu	Gly 180
Thr	Pro	Cys	Ser	Gln 185	Cys	Pro	Ser		Tyr 190	His	Cys	Lys	Asn	Ser 195
Leu	Cys	Glu	Pro	Ile 200	Gly	Ser	Pro	Glu	Asp 205	Ala	Gln	Asp	Leu	Pro 210
Tyr	Leu	Val	Thr	Glu 215	Ala	Pro	Ser	Phe	Arg 220	Ala	Thr	Glu	Ala	Ser 225
Asp	Ser	Arg	Lys	Met 230	Gly	Thr	Pro	Ser	Ser 235	Leu	Ala	Thr	Gly	Ile 240
Pro	Ala	Phe	Leu	Val 245	Thr	Glu	Val	Ser	Gly 250	Ser	Leu	Ala	Thr	Lys 255
Ala	Leu	Pro	Ala	Val 260	Glu	Thr	Gln	Ala	Pro 265	Thr	Ser	Leu	Ala	Thr 270
Lys	Asp	Pro	Pro	Ser 275	Met	Ala	Thr	Glu	Ala 280	Pro	Pro	Cys	Val	Thr 285
Thr	Glu	Val	Pro	Ser 290	Ile	Leu	Ala	Ala	His 295	Ser	Leu	Pro	Ser	Leu 300
Asp	Glu	Glu	Pro	Val 305	Thr	Phe	Pro	Lys	Ser 310	Thr	His	Val	Pro	Ile 315
Pro	Lys	Ser	Ala	Asp 320	Lys	Val	Thr	Asp	Lys 325	Thr	Lys	Val	Pro	Ser 330
Arg	Ser	Pro	Glu	Asn 335	Ser	Leu	Asp	Pro	Lys 340	Met	Ser	Leu	Thr	Gly 345
Ala	Arg	Glu	Leu	Leu 350	Pro	His	Ala	Gln	Glu 355	Glu	Ala	Glu	Ala	Glu 360
Ala	Glu	Leu	Pro	Pro 365	Ser	Ser	Glu	Val	Leu 370	Ala	Ser	Val	Phe	Pro 375
Ala	Gln	Asp	Lys	Pro 380	Gly	Glu	Leu	Gln	Ala 385	Thr	Leu	Asp	His	Thr 390
Gly	His	Thr	Ser	Ser	Lys	Ser	Leu	Pro	Asn	Phe	Pro	Asn	Thr	Ser

Ala Thr Ala Asn Ala Thr Gly Gly Arg Ala Leu Ala Leu Gln Ser 415 410 Ser Leu Pro Gly Ala Glu Gly Pro Asp Lys Pro Ser Val Val Ser 430 Gly Leu Asn Ser Gly Pro Gly His Val Trp Gly Pro Leu Leu Gly 440 Leu Leu Leu Pro Pro Leu Val Leu Ala Gly Ile Phe 455 <210> 286 <211> 19 <212> DNA <213> Artificial Sequence <220> <223> Synthetic Oligonucleotide Probe <400> 286 tcctgcagtt tcctgatgc 19 <210> 287 <211> 24 <212> DNA <213> Artificial Sequence <223> Synthetic Oligonucleotide Probe <400> 287 ctcatattgc acaccagtaa ttcg 24 <210> 288 <211> 45 <212> DNA <213> Artificial Sequence <223> Synthetic Oligonucleotide Probe <400> 288 atgaggagaa acgtttgatg gtggagctgc acaacctcta ccggg 45 <210> 289 <211> 3662 <212> DNA <213> Homo Sapien <400> 289 gtaactgaag tcaggctttt catttgggaa gccccctcaa cagaattcgg 50

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<212> PRT

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Ile	Leu	Pro	Glu	His 80	Leu	Lys	Glu	Phe	Gln 85	Ser	Leu	Glu	Thr	Leu 90
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Ala	Leu	Gln	Leu	Lys 110	Tyr	Leu	Tyr	Leu	Asn 115	Ser	Asn	Arg	Val	Thr 120
Ser	Met	Glu	Pro	Gly 125	Tyr	Phe	Asp	Asn	Leu 130	Ala	Asn	Thr	Leu	Leu 135
Val	Leu	Lys	Leu	Asn 140	Arg	Asn	Arg	Ile	Ser 145	Ala	Ile	Pro	Pro	Lys 150
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Asp	Gly	Ala	Phe	Trp 200	Gly	Leu	Ser	Asn	Met 205	Glu	Ile	Leu	Gln	Leu 210
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Phe	Thr	Gly	Leu	Asp 350	Ala	Leu	Glu	His	Leu 355	Asp	Leu	Ser	Asp	Asn 360
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Gln	Leu	Lys	Trp	Leu 395	Pro	Gln	Trp	Val	Ala 400	Glu	Asn	Asn	Phe	Gln 405
Ser	Phe	Val	Asn	Ala 410	Ser	Cys	Ala	His	Pro 415	Gln	Leu	Leu	Lys	Gly 420
Arg	Ser	Ile	Phe	Ala 425	.Val	Ser	Pro	Asp	Gly 430	Phe	Val	Cys	Asp	Asp 435
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Ile	Lys	Gly	Ser	Asn 455	Leu	Ser	Phe	Ile	Cys 460	Ser	Ala	Ala	Ser	Ser 465
Ser	Asp	Ser	Pro	Met 470	Thr	Phe	Ala	Trp	Lys 475	Lys	Asp	Asn	Glu	Leu 480
Leu `	His	Asp	Ala		Met	Glu	Asn	Tyr	Ala 490	His	Leu	Arg	Ala	Gln 495
Gly	Gly	-Glu	Val	Met 500	Glu	Tyr	Thr	Thr	Ile 505	Leu	Arg	Leu	Arg	Glu 510
Val	Glu	Phe	Ala	Ser 515	Glu	Gly	Lys	Tyr	Gln 520	Cys	Val	Ile	Ser	Asn 525
His	Phe	Gly	Ser	Ser 530	Tyr	Ser	Val	Lys	Ala 535	Lys	Leu	Thr	Val	Asn 540
Met	Leu	Pro	Ser	Phe 545	Thr	Lys	Thr	Pro	Met 550	Asp	Leu	Thr	Ile	Arg 555

Gly	Ala	Met			Leu	Glu	Cys	Ala 565	Ala	Val	Gly	His	Pro 570
Pro	Gln	Ile	Ala 575	Trp	Gln	Lys	Asp	Gly 580	Gly	Thr	Asp	Phe	Pro 585
Ala	Arg	Glu	Arg 590	Arg	Met	His	Val	Met 595	Pro	Glu	Asp	Asp	Val 600
Phe	Ile	Val	Asp 605	Val	Lys	Ile	Glu	Asp 610	Ile	Gly	Val	Tyr	Ser 615
Thr	Ala	Gln	Asn 620	Ser	Aļa	Gly	Ser	Ile 625	Ser	Ala	Asn	Ala	Thr 630
Thr	Val	Leu	Glu 635	Thr	Pro	Ser	Phe	Leu 640	Arg	Pro	Leu	Leu	Asp 645
Thr	Val	Thr	Lys 650	Gly	Glu	Thr	Ala	Val 655	Leu	Gln	Cys	Ile	Ala 660
Gly	Ser	Pro	Pro 665	Pro	Lys	Leu	Asn	Trp 670	Thr	Lys	Asp	Asp	Ser 675
Leu	Val	Val	Thr 680	Glu	Arg	His	Phe	Phe 685	Ala	Ala	Gly	Asn	Gln 690
Leu	Ile	Ile	Val 695	Asp	Ser	Asp	Val [.]	Ser 700	Asp	Ala	Gly	Lys	Tyr 705
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Leu	Ser	Val	Ile 725	Pro	Thr	Pro	Thr	Cys 730	Asp	Ser	Pro	Gln	Met 735
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Ile	Ile	Ala	Val 755	Val	Cys	Cys	Val	Val 760	Gly	Thr	Ser	Leu	Val 765
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Ile	Thr	Asn		Asp	Glu	Thr	Asn		Pro	Ala	Asp	Ile	Pro 795
туr	Leu	Ser	Ser	Gln	Gly	Thr	Leu	Ala	Asp	Arg	Gln	Asp	
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Gln Ala Arg Glu Arg Arg Met Phe Ile Val Asp Val Lys Thr Ala Gln Asp Val Lys Thr Val Gln Asp Glu Fro Thr Val Thr Lys Glu Glu Glu Gly Ser Pro Pro Pro Lys G65 Pro Pro Er Gen Arg Leu Val Val Thr Glu Arg Cys Glu Met Ser Asp Ser Leu Ser Val Ile Pro Thr Ala Pro Ser Leu Asp Asp Ile Ile Ala Val Val Cys Val Val Ile Tyr His Tyr Leu Ser Ser Glu Fro Ile Tyr His <td>Pro Gln Ile Ala Trp Gln Lys 575 Ala Arg Glu Arg Arg Met His 590 Phe Ile Val Asp 590 Val Lys Ile Phe Ile Val Asp 605 Val Lys Ile Thr Ala Gln Asp 620 Ser Ala Gly Thr Val Leu Gly Glu Thr Ser Thr Val Leu Gly Glu Thr Leu Gly Ser Pro Pro Leu Leu Leu Pro Leu Leu His Ser Asp Asp</td> <td>Pro Gln Ile Ala Trp Gln Lys Asp 575 Ala Arg Glu Arg Arg Met His Val Phe Ile Val Asp S90 Val Lys Ile Glu Thr Ala Gln Asp S60 Ser Ala Gly Ser Thr Ala Gln Asp S60 Gly Glu Thr Ala Thr Val Leu Gly Gly Glu Thr Ala Gly Ser Pro Pro Pro Leu Asn Phe Gly Ser Pro Pro Pro Leu Asn Phe Leu Val Thr Asp Ser Asp Pro Pro Thr Pro Thr Leu Ser Val Pro Thr Pro Thr Pro Thr Ala Pro Ser Leu Asp Pro Pro Pro</td> <td>Pro Gln Ile Ala S75 Trp Gln Lys Asp S80 Ala Arg Glu Arg Arg Met His Val Ser S95 Phe Ile Val Asp S95 Val Lys Ile Glu Asp S95 Thr Ala Gln Asp S60 Ser Ala Gly Ser G25 Thr Val Glu Thr Pro Ser G25 Thr Val Leu Gly Glu Thr Ala Gly Ser G25 Gly Ser Pro Gly Glu Thr Ala G160 Ser G160 Ala Ala</td> <td>Fro Gln Ile Ala S75 Trp Gln Lys Asp Gly S80 Gly Gly S80 Ala Arg Glu Arg Arg Arg Met His Val Met S95 Pro Phe Ile Val Asp S90 Val Lys Ile Glu Asp S95 Ile Phe Ile Val Asp S95 Val Lys Ile Glu Asp S95 Ile Glu Asp S95 Ile Glu Asp S95 Ile Glu Arg G25 Fro Gly Ser G25 Fro Gly Ser G25 Fro Gly Ser G25 Fro G25 Fro G25 Fro G25 Fro G25 Fro G25 Fro G26 Fro G27 G28 Fro Asp Fro G28 Fro Asp Fro G28 Fro Asp Fro G28 Fro G28</td> <td>Pro Gln Ile Ala 575 Trp Gln Lys Asp 580 Gly 580 Thr 580 Ala Arg Glu Arg Arg Arg Het His Val Met 580 Pro 580 Glu 599 Phe Glu 599 Phe Glu 599 Pro 610 Phe Ile Val Asp 660 Val Lys Ile Glu Asp 610 Glu 625 Ser Ala 625 Ser Glu Arg 670 Pro 665 Pro 666 Pro 666<!--</td--><td>Pro Gln Ile Ala 575 Trp Gln Lys Asp 580 Gly Thr Asp 580 Ala Arg Glu Arg Arg Met His Val Met 589 Fro Glu Asp 580 Phe Ile Val Asp 605 Val Lys Ile Glu Asp 610 Val Asp 610 Fro Glu Asp 610 Fro Glu Asp 612 Fro Ile Glu Asp 612 Fro Ile Glu Asp 625 Fro Ile Glu Asp 625 Fro Ile Glu Arg Pro Leu Arg Fro Ile Arg Arg Ile Arg Fro Ile Arg Arg Ile Arg Ile Arg Ile Arg Ile Ile Ile Ile Ile A</td><td>Pro Gln Ile Ala S75 Trp Gln Lys Asp S80 Gly Thr Asp Phe S80 Ala Arg Glu Arg Met His Val Pro Glu Asp Asp Asp S95 Phe Ile Val Asp S90 Val Lys Ile Glu Asp Ile Glu Tyr Thr Ala Gln Asp S90 Ser Ala Gly Ser Ile Glu Tyr Thr Ala Gln Asp S90 Glu Thr Ala Asp S90 Glu Ile G40 Arg Pro Leu Leu Arg Pro Leu Leu Arg Pro Leu Leu Arg Pro Ile Arg Arg</td></td>	Pro Gln Ile Ala Trp Gln Lys 575 Ala Arg Glu Arg Arg Met His 590 Phe Ile Val Asp 590 Val Lys Ile Phe Ile Val Asp 605 Val Lys Ile Thr Ala Gln Asp 620 Ser Ala Gly Thr Val Leu Gly Glu Thr Ser Thr Val Leu Gly Glu Thr Leu Gly Ser Pro Pro Leu Leu Leu Pro Leu Leu His Ser Asp Asp	Pro Gln Ile Ala Trp Gln Lys Asp 575 Ala Arg Glu Arg Arg Met His Val Phe Ile Val Asp S90 Val Lys Ile Glu Thr Ala Gln Asp S60 Ser Ala Gly Ser Thr Ala Gln Asp S60 Gly Glu Thr Ala Thr Val Leu Gly Gly Glu Thr Ala Gly Ser Pro Pro Pro Leu Asn Phe Gly Ser Pro Pro Pro Leu Asn Phe Leu Val Thr Asp Ser Asp Pro Pro Thr Pro Thr Leu Ser Val Pro Thr Pro Thr Pro Thr Ala Pro Ser Leu Asp Pro Pro Pro	Pro Gln Ile Ala S75 Trp Gln Lys Asp S80 Ala Arg Glu Arg Arg Met His Val Ser S95 Phe Ile Val Asp S95 Val Lys Ile Glu Asp S95 Thr Ala Gln Asp S60 Ser Ala Gly Ser G25 Thr Val Glu Thr Pro Ser G25 Thr Val Leu Gly Glu Thr Ala Gly Ser G25 Gly Ser Pro Gly Glu Thr Ala G160 Ser G160 Ala Ala	Fro Gln Ile Ala S75 Trp Gln Lys Asp Gly S80 Gly Gly S80 Ala Arg Glu Arg Arg Arg Met His Val Met S95 Pro Phe Ile Val Asp S90 Val Lys Ile Glu Asp S95 Ile Phe Ile Val Asp S95 Val Lys Ile Glu Asp S95 Ile Glu Asp S95 Ile Glu Asp S95 Ile Glu Arg G25 Fro Gly Ser G25 Fro Gly Ser G25 Fro Gly Ser G25 Fro G25 Fro G25 Fro G25 Fro G25 Fro G25 Fro G26 Fro G27 G28 Fro Asp Fro G28 Fro Asp Fro G28 Fro Asp Fro G28 Fro G28	Pro Gln Ile Ala 575 Trp Gln Lys Asp 580 Gly 580 Thr 580 Ala Arg Glu Arg Arg Arg Het His Val Met 580 Pro 580 Glu 599 Phe Glu 599 Phe Glu 599 Pro 610 Phe Ile Val Asp 660 Val Lys Ile Glu Asp 610 Glu 625 Ser Ala 625 Ser Glu Arg 670 Pro 665 Pro 666 Pro 666 </td <td>Pro Gln Ile Ala 575 Trp Gln Lys Asp 580 Gly Thr Asp 580 Ala Arg Glu Arg Arg Met His Val Met 589 Fro Glu Asp 580 Phe Ile Val Asp 605 Val Lys Ile Glu Asp 610 Val Asp 610 Fro Glu Asp 610 Fro Glu Asp 612 Fro Ile Glu Asp 612 Fro Ile Glu Asp 625 Fro Ile Glu Asp 625 Fro Ile Glu Arg Pro Leu Arg Fro Ile Arg Arg Ile Arg Fro Ile Arg Arg Ile Arg Ile Arg Ile Arg Ile Ile Ile Ile Ile A</td> <td>Pro Gln Ile Ala S75 Trp Gln Lys Asp S80 Gly Thr Asp Phe S80 Ala Arg Glu Arg Met His Val Pro Glu Asp Asp Asp S95 Phe Ile Val Asp S90 Val Lys Ile Glu Asp Ile Glu Tyr Thr Ala Gln Asp S90 Ser Ala Gly Ser Ile Glu Tyr Thr Ala Gln Asp S90 Glu Thr Ala Asp S90 Glu Ile G40 Arg Pro Leu Leu Arg Pro Leu Leu Arg Pro Leu Leu Arg Pro Ile Arg Arg</td>	Pro Gln Ile Ala 575 Trp Gln Lys Asp 580 Gly Thr Asp 580 Ala Arg Glu Arg Arg Met His Val Met 589 Fro Glu Asp 580 Phe Ile Val Asp 605 Val Lys Ile Glu Asp 610 Val Asp 610 Fro Glu Asp 610 Fro Glu Asp 612 Fro Ile Glu Asp 612 Fro Ile Glu Asp 625 Fro Ile Glu Asp 625 Fro Ile Glu Arg Pro Leu Arg Fro Ile Arg Arg Ile Arg Fro Ile Arg Arg Ile Arg Ile Arg Ile Arg Ile Ile Ile Ile Ile A	Pro Gln Ile Ala S75 Trp Gln Lys Asp S80 Gly Thr Asp Phe S80 Ala Arg Glu Arg Met His Val Pro Glu Asp Asp Asp S95 Phe Ile Val Asp S90 Val Lys Ile Glu Asp Ile Glu Tyr Thr Ala Gln Asp S90 Ser Ala Gly Ser Ile Glu Tyr Thr Ala Gln Asp S90 Glu Thr Ala Asp S90 Glu Ile G40 Arg Pro Leu Leu Arg Pro Leu Leu Arg Pro Leu Leu Arg Pro Ile Arg Arg

Tyr Val Ser Ser Glu Ser Gly Ser His His Gln Phe Val Thr Ser 815 Ser Gly Ala Gly Phe Phe Leu Pro Gln His Asp Ser Ser Gly Thr 830 835 Cys His Ile Asp Asn Ser Ser Glu Ala Asp Val Glu Ala Ala Thr Asp Leu Phe Leu Cys Pro Phe Leu Gly Ser Thr Gly Pro Met Tyr Leu Lys Gly Asn Val Tyr Gly Ser Asp Pro Phe Glu Thr Tyr His 880 Thr Gly Cys Ser Pro Asp Pro Arg Thr Val Leu Met Asp His Tyr 890 895 Glu Pro Ser Tyr Ile Lys Lys Lys Glu Cys Tyr Pro Cys Ser His 905. 910 Pro Ser Glu Glu Ser Cys Glu Arg Ser Phe Ser Asn Ile Ser Trp Pro Ser His Val Arg Lys Leu Leu Asn Thr Ser Tyr Ser His Asn Glu Gly Pro Gly Met Lys Asn Leu Cys Leu Asn Lys Ser Ser Leu 955 Asp Phe Ser Ala Asn Pro Glu Pro Ala Ser Val Ala Ser Ser Asn 965 970 Ser Phe Met Gly Thr Phe Gly Lys Ala Leu Arg Arg Pro His Leu Asp Ala Tyr Ser Ser Phe Gly Gln Pro Ser Asp Cys Gln Pro Arg Ala Phe Tyr Leu Lys Ala His Ser Ser Pro Asp Leu Asp Ser Gly 1015 1020 1010 Ser Glu Glu Asp Gly Lys Glu Arg Thr Asp Phe Gln Glu Glu Asn 1030 His Ile Cys Thr Phe Lys Gln Thr Leu Glu Asn Tyr Arg Thr Pro 1040 1045 Asn Phe Gln Ser Tyr Asp Leu Asp Thr 1055

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tgtctaaact gaaggagete tggttgegaa acaaccecat tgaaagcate 1300 cettettatg ettttaacag aatteettet ttgegeegae tagaettagg 1350 ggaattgaaa agactttcat acatctcaga aggtgccttt gaaggtctgt 1400 ccaacttgag gtatttgaac cttgccatgt gcaaccttcg ggaaatccct 1450 aacctcacac cgctcataaa actagatgag ctggatcttt ctgggaatca 1500 tttatctgcc atcaggcctg gctctttcca gggtttgatg caccttcaaa 1550 aactgtggat gatacagtcc cagattcaag tgattgaacg gaatgccttt 1600 gacaaccttc agtcactagt ggagatcaac ctggcacaca ataatctaac 1650 attactgcct catgacctct tcactccctt gcatcatcta gagcggatac 1700 atttacatca caaccettgg aactgtaact gtgacatact gtggctcagc 1750 tggtggataa aagacatggc cccctcgaac acagcttgtt gtgcccggtg 1800 taacactcct cccaatctaa aggggaggta cattggagag ctcgaccaga 1850 attacttcac atgctatgct coggtgattg tggagccccc tgcagacctc 1900 aatgtcactg aaggcatggc agctgagctg aaatgtcggg cctccacatc 1950 cctgacatct gtatcttgga ttactccaaa tggaacagtc atgacacatg 2000 qqqcqtacaa agtgcggata gctgtgctca gtgatggtac gttaaatttc 2050 acaaatgtaa ctgtgcaaga tacaggcatg tacacatgta tggtgagtaa 2100 ttccgttggg aatactactg cttcagccac cctgaatgtt actgcagcaa 2150 ccactactcc tttctcttac ttttcaaccg tcacagtaga gactatggaa 2200 ccgtctcagg atgaggcacg gaccacagat aacaatgtgg gtcccactcc 2250 agtggtcgac tgggagacca ccaatgtgac cacctctctc acaccacaga 2300 gcacaaggtc gacagagaaa accttcacca tcccagtgac tgatataaac 2350 agtgggatcc caggaattga tgaggtcatg aagactacca aaatcatcat 2400 tgggtgtttt gtggccatca cactcatggc tgcagtgatg ctggtcattt 2450 tctacaagat gaggaagcag caccatcggc aaaaccatca cgccccaaca 2500 aggactgttg aaattattaa tgtggatgat gagattacgg gagacacacc 2550 catggaaagc cacctgccca tgcctgctat cgagcatgag cacctaaatc 2600 actataactc atacaaatct cccttcaacc acacaacaac agttaacaca 2650 ataaattcaa tacacagttc agtgcatgaa ccgttattga tccgaatgaa 2700 ctctaaagac aatgtacaag agactcaaat ctaaaacatt tacagagtta 2750 caaaaaacaa acaatcaaaa aaaaagacag tttattaaaa atgacacaaa 2800 tgactggct aaatctactg tttcaaaaaa gtgtctttac aaaaaaacaa 2850 aaaagaaaag aaatttattt attaaaaatt ctattgtgat ctaaagcaga 2900 caaaaa 2906

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<211> 640

<212> PRT

<213> Homo Sapien

<400> 292

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Pro Arg Phe Asn Arg Ala Leu Phe Asp Pro Leu Leu Val Val Leu 20 25 30

Leu Ala Leu Gln Leu Leu Val Val Ala Gly Leu Val Arg Ala Gln 35 40 45

Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val
50 55 60

Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser
65 70 75

Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile 80 85 90

Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu 95 100 105

Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe 110 115 120

Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg 125 130 135

Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu 140 145 150

Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser

				155					160					165
Tyr	Ala	Phe	Asn	Arg 170	Ile	Pro	Ser	Leu	Arg 175	Arg	Leu	Asp	Leu	Gly 180
Glu	Leu	Lys	Arg	Leu 185	Ser	Tyr	Ile	Ser	Glu 190	Gly	Ala	Phe	Glu	Gly 195
Leu	Ser	Asn	Leu	Arg 200	Tyr	Leu	Asn	Leu	Ala 205	Met	Cys	Asn		Arg 210
Glu	Ile	Pro	Asn	Leu 215	Thr	Pro	Leu	Ile	Lys 220	Leu	Asp	Glu	Leu	Asp 225
Leu	Ser	Gly	Asn	His 230	Leu	Ser	Ala	Ile	Arg 235		Gly	Ser	Phe	Gln 240
Gly	Leu	Met	His	Leu 245	Gln	Lys	Leu	Trp	Met [.] 250	Ile	Gln	Ser	Gln	Ile 255
Gln	Val	Ile	Glu	Arg 260	Asn	Ala	Phe	Asp	Asn 265	Leu	Gln	Ser	Leu	Val 270
Glu	Ile	Asn	Leu	Ala 275	His	Asn	Asn	Leu	Thr 280	Leu	Leu	Pro	His	Asp 285
Leu	Phe	Thr	Pro	Leu 290		His	Leu	Glu	Arg 295	Ile	His	Leu	His	His 300
Asn	Pro	Trp	Asn	Cys 305	Asn	Cys	Asp	Ile	Leu 310	Trp	Leu	Ser	Trp	Trp 315
Ile	Lys	Asp	Met	Ala 320	Pro	Ser	Asn	Thr	Ala 325	Cys	Cys	Ala	Arg	Cys 330
Asn	Thr	Pro	Pro	Asn 335	Leu	Lys	Gly	Arg	Tyr 340	Ile	Gly	Glu	Leu	Asp 345
Gln	Asn	Tyr	Phe	Thr 350		Tyr	Ala	Pro	Val 355	Ile	Val	Glu	Pro	Pro 360
Ala	Asp	Leu	Asn	Val 365	Thr	Glu	Gly	Met	Ala 370	Ala	Glu	Leu	Lys	Cys 375
Arg	Ala	Ser	Thr	Ser 380	Leu	Thr	Ser	Val	Ser 385	Trp	Ile	Thr	Pro	Asn 390
Gly	Thr	Val	Met	Thr 395	His	Gly	Ala	Tyr	Lys 400	Val	Arg	Ile	Ala	Val 405
Leu	Ser	Asp	Gly	Thr 410	Leu	Asn	Phe	Thr	Asn 415	Val	Thr	Val	Gln	Asp 420

Thr Gly Met Tyr Thr Cys Met Val Ser Asn Ser Val Gly Asn Thr 430 Thr Ala Ser Ala Thr Leu Asn Val Thr Ala Ala Thr Thr Thr Pro 440 445 Phe Ser Tyr Phe Ser Thr Val Thr Val Glu Thr Met Glu Pro Ser 455 Gln Asp Glu Ala Arg Thr Thr Asp Asn Asn Val Gly Pro Thr Pro 470 475 Val Val Asp Trp Glu Thr Thr Asn Val Thr Thr Ser Leu Thr Pro 490 -Gln Ser Thr Arg Ser Thr Glu Lys Thr Phe Thr Ile Pro Val Thr 500 Asp Ile Asn Ser Gly Ile Pro Gly Ile Asp Glu Val Met Lys Thr Thr Lys Ile Ile Ile Gly Cys Phe Val Ala Ile Thr Leu Met Ala 535 Ala Val Met Leu Val Ile Phe Tyr Lys Met Arg Lys Gln His His 545 550 Arg Gln Asn His His Ala Pro Thr Arg Thr Val Glu Ile Ile Asn 560 Val Asp Asp Glu Ile Thr Gly Asp Thr Pro Met Glu Ser His Leu 580 Pro Met Pro Ala Ile Glu His Glu His Leu Asn His Tyr Asn Ser 590 595 Tyr Lys Ser Pro Phe Asn His Thr Thr Thr Val Asn Thr Ile Asn 610 Ser Ile His Ser Ser Val His Glu Pro Leu Leu Ile Arg Met Asn 625 620 Ser Lys Asp Asn Val Gln Glu Thr Gln Ile 635 <210> 293

<211> 4053

<212> DNA

<213> Homo Sapien

<400> 293

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aaa 4053

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٠.	4	_	v	_	_	"	=	

<211> 1119

<212> PRT

<213> Homo Sapien

<400> 294

Met Ser Ala Pro Ser Leu Arg Ala Arg Ala Ala Gly Leu Gly Leu

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Leu Leu Cys Ala Val Leu Gly Arg Ala Gly Arg Ser Asp Ser Gly

Gly Arg Gly Glu Leu Gly Gln Pro Ser Gly Val Ala Ala Glu Arg
35 40 45

Pro Cys Pro Thr Thr Cys Arg Cys Leu Gly Asp Leu Leu Asp Cys
50 55 60

Ser Arg Lys Arg Leu Ala Arg Leu Pro Glu Pro Leu Pro Ser Trp
65 70 75

Val Ala Arg Leu Asp Leu Ser His Asn Arg Leu Ser Phe Ile Lys 80 85 90

Ala Ser Ser Met Ser His Leu Gln Ser Leu Arg Glu Val Lys Leu 95 100 105

Asn Asn Asn Glu Leu Glu Thr Ile Pro Asn Leu Gly Pro Val Ser 110 115 120

Ala Asn Ile Thr Leu Leu Ser Leu Ala Gly Asn Arg Ile Val Glu 125 130 135

Ile Leu Pro Glu His Leu Lys Glu Phe Gln Ser Leu Glu Thr Leu 140 145 150

Asp Leu Ser Ser Asn Asn Ile Ser Glu Leu Gln Thr Ala Phe Pro 155 160 165

Ala Leu Gln Leu Lys Tyr Leu Tyr Leu Asn Ser Asn Arg Val Thr 170 175 180

Ser Met Glu Pro Gly Tyr Phe Asp Asn Leu Ala Asn Thr Leu Leu 185 190 195

Val Leu Lys Leu Asn Arg Asn Arg Ile Ser Ala Ile Pro Pro Lys 200 205 210

Met Phe Lys Leu Pro Gln Leu Gln His Leu Glu Leu Asn Arg Asn

				215				. •	220					225
Lys	Ile	Lys	Asn	Val 230	Asp	Gly	Leu	Thr	Phe 235	Gln	Gly	Leu	Gly	Ala 240
Leu	Lys	Ser	Leu	Lys 245	Met	Gln	Arg	Asn	Gly 250	Val	Ťhr	Lys	Leu	Met 255
Asp	Gly	Ala	Phe	Trp 260	Gly	Leu	Ser	Asn	Met 265	Glu	Ile	Leu	Gln	Leu 270
Asp	His	Asn	Asn	Leu 275	Thr	Glu	Ile	Thr	Lys 280	Gly	Trp	Leu	Tyr	Gly 285
Leu	Leu	Met	Leu	Gln 290	Glu	Leu	His	Leu	Ser 295	Gln	Asn	Ala	Ile	Asn 300
Arg	Ile	Ser	Pro	Asp 305	Ala	Trp	Glu	Phe	Cys 310	Gln	Lys	Leu	Ser	Glu 315
Leu	Asp	Leu	Thr	Phe 320	Asn	His	Leu	Ser	Arg 325	Leu	Asp	Asp	Ser	Ser 330
Phe	Leu	Gly	Leu	Ser 335	Leu	Leu	Asn	Thr	Leu 340	His	Ile	Gly	Asn	Asn 345
Arg	Val	Ser	Tyr	Ile 350	Ala	Asp	Cys	Ala	Phe 355	Arg	Gly	Leu	Ser	Ser 360
Leu	Lys	Thr	Leu	Asp 365	Leu	Lys	Asn	Asn	Glu 370	Ile	Ser	Trp	Thr	Ile 375
Glu	Asp	Met	Asn	Gly 380	Ala	Phe	Ser	Gly	Leu 385	Asp	Lys	Leu	Arg	Arg 390
Leu	Ile	Leu	Gln	Gly 395	Asn	Arg	Ile	Arg	Ser 400	Ile	Thr	Lys	Lys	Ala 405
Phe	Thr	Gly	Leu	_				His				Ser		Asn 420
Ala	Ile		Ser		Gln	Gly	Asn	Ala		Ser		Met	Lys	Lys 435
Leu	Gln	Gln	Leu	His 440	Leu	Asn	Thr	Ser	Ser 445	Leu	Leu	Cys	Asp	Cys 450
Gln	Leu	Lys	Trp	Leu 455	Pro	Gln	Trp	Val	Ala 460	Glu	Asn	Asn	Phe	Gln 465
Ser	Phe	Val	Asn	Ala 470	Ser	Cys	Ala	His	Pro 475		Leu	Leu	Lys	Gly 480

Arg	Ser	Ile	Phe	Ala 485	Val	Ser	Pro	Asp	Gly 490	Phe	Val	Cys	Asp	Asp 495
Phe	Pro	Lys	Pro	Gln 500	Ile	Thr	Val	Gln	Pro 505		Thr	Gln	Ser	Ala 510
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			Gln	680					685					690
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Arg	Thr	Val	Thr	Lys 710	Gly	Glu	Thr	Ala	Val 715	Leu	Ģln	Cys	Ile	Ala 720
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His Thr Pro Ala Ser Asp Ile Gln Ile Ile Trp Leu Phe Glu Arg

Pro	His	Thr	Met	Pro 65	Lys	Tyr	Leu	Leu	Gly 70	Ser	Val	Asn	Lys	Ser 75
Val	Val	Pro	Asp	Leu 80	Glu	Tyr	Gln	His	Lys 85	Phe	Thr	Met	Met	Pro 90
Pro	Asn	Ala	Ser	Leu 95	Leu	Ile	Asn	Pro	Leu 100	Gln	Phe	Pro	Asp	Glu 105
Gly	Asn	Tyr	Ile	Val 110	Lys	Val	Asn	Ile	Gln 115	Gly	Asn	Gly	Thr	Leu 120
Ser	Ala	Ser	Gln	Lys 125	Ile	Gln	Val	Thr	Val 130	Asp	Asp	Pro	Val	Thr 135
Lys	Pro	Val	Val	Gln 140	Ile	His	Pro	Pro	Ser 145	Gly	Ala	Val	Glu	Tyr 150
Val	Gly	Asn	Met	Thr 155	Leu	Thr	Cys	His	Val 160	Glu	Gly	Gly	Thr	Arg 165
Leu	Ala	Tyr	Gln	Trp 170	Leu	Lys	Asn	Gly	Arg 175	Pro	Val	His	Thr	Ser 180
Ser	Thr	Tyr	Ser	Phe 185	Ser	Pro	Gln	Asn	Asn 190	Thr	Leu	His	Ile	Ala 195
Pro	Val	Thr	Lys	Glu 200	Asp	Ile	Gly	Asn	Tyr 205	Ser	Cys	Leu	Val	Arg 210
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Lys	Val	Gly	Glu	Val 245	Phe	Thr	Val	Ásp	Leu 250	Gly	.Glu	Ala	Ile	Leu 255
Phe	Asp	Cys	Ser	Ala 260	Asp	Ser	His	Pro	Pro 265	Asn	Thr	Tyr	Ser	Trp 270
Ile	Arg	Arg	Thr	Asp 275	Asn	Thr	Thr	Tyr	Ile 280	Ile	Lys	His	Gly	Pro 285
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Ile	Ser	Leu	Phe	Leu 350	Ile	Ile	Ser	Met	Cys 355	Leu	Leu	Phe	Leu	Trp 360
Lys :	Lys	Tyr	Gln	Pro 365	Tyr	Lys	Val	Ile	Lys 370	Gln	Lys	Leu	Glu	Gly 375
Arg	Pro	Glu	Thr	Glu 380	Tyr	Arg	Lys	Ala	Gln 385	Thr	Phe	Ser	Gly	His 390
Glu /	Asp	Ala	Leu	Asp 395	Asp	Phe	Gly	Ile	Tyr 400	Glu	Phe	Val	Ala	Phe 405
Pro 1	Asp	Val	Ser	Gly 410	Val	Ser	Arg	Ile	Pro 415	Ser	Arg	Ser	Val	Pro 420
Ala	Ser	Asp		Val 425	Ser	Gly	Gln	Asp	Lėu 430	His	Ser	Thr	Val	Tyr 435
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Asp Trp Met Ile Glu Phe Tyr Ala Pro Trp Cys Pro Ala Cys Gln
50 55 60

Asn Leu Gln Pro Glu Trp Glu Ser Phe Ala Glu Trp Gly Glu Asp
65 70 75

Leu Glu Val Asn Ile Ala Lys Val Asp Val Thr Glu Gln Pro Gly
80 85 90

Leu Ser Gly Arg Phe Ile Ile Thr Ala Leu Pro Thr Ile Tyr His
95 100 105

Cys Lys Asp Gly Glu Phe Arg Arg Tyr Gln Gly Pro Arg Thr Lys 110 115 120

Lys Asp Phe Ile Asn Phe Ile Ser Asp Lys Glu Trp Lys Ser Ile 125 130 135

Glu Pro Val Ser Ser Trp Phe Gly Pro Gly Ser Val Leu Met Ser 140 145 150

Ser Met Ser Ala Leu Phe Gln Leu Ser Met Trp Ile Arg Thr Cys 155 160 165

His Asn Tyr Phe Ile Glu Asp Leu Gly Leu Pro Val Trp Gly Ser 170 175 180

Tyr Thr Val Phe Ala Leu Ala Thr Leu Phe Ser Gly Leu Leu Leu 185 190 195

Gly Leu Cys Met Ile Phe Val Ala Asp Cys Leu Cys Pro Ser Lys 200 205 210

Arg Arg Pro Gln Pro Tyr Pro Tyr Pro Ser Lys Lys Leu Leu

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Ser (Glu Ser	Ala	Gln 230	Pro	Leu	Lys	Lys	Val 235	Glu	Glu	Glu	Gln	Glu 240
Ala A	Asp Glu	Glu	Asp 245	Val	Ser	Glu	Glu	Glu 250	Ala	Glu	Ser	Lys	Glu 255
Gly 7	Thr Asn	Lys	Asp 260	Phe	Pro	Gln	Asn	Ala 265	Ile	Arg	Gln	Arg	Ser 270
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65 70 75

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Lys Arg Leu Asn Thr Asp Trp Pro Ala Leu Glu Asp Leu Val Leu 95 100 105

Gln Asp Ser Ala Ala Gly Phe Ile Ala Asn Leu Ser Val Gln Arg 110 115 120

Gln Phe Phe Pro Thr Asp Glu Asp Glu Ile Gly Ala Ala Lys Ala , 125 130 135

Leu Met Arg Leu Gln Asp Thr Tyr Arg Leu Asp Pro Gly Thr Ile 140 145 150

Ser Arg Gly Glu Leu Pro Gly Thr Lys Tyr Gln Ala Met Leu Ser 155 160 165

Val Asp Asp Cys Phe Gly Met Gly Arg Ser Ala Tyr Asn Glu Gly
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Asp Tyr Tyr His Thr Val Leu Trp Met Glu Gln Val Leu Lys Gln 185 190 195

Leu Asp Ala Gly Glu Glu Ala Thr Thr Thr Lys Ser Gln Val Leu 200 205 210

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<211> 772

<212> PRT

<213> Homo Sapien

<400> 339

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Val Gly Glu Arg Gly Gly Pro Gln Asn Pro Asp Ser Arg Ala Arg
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Leu Asp Gln Ser Asp Glu Asp Phe Lys Pro Arg Ile Val Pro Tyr
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Tyr Arg Asp Pro Asn Lys Pro Tyr Lys Lys Val Leu Arg Thr Arg
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Tyr Ile Gln Thr Glu Leu Gly Ser Arg Glu Arg Leu Leu Val Ala

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Asn	Ąrg	Thr	Val	Ala 125	His	His	Phe	Pro	Arg 130	Leu	Leu	Tyr	Phe	Thr 135
Gly	Gln	Arg	Gly	Ala 140	Arg	Ala	Pro	Ala	Gly 145	Met	Gln	Val	Val	Ser 150
His	Gly	Asp	Glu	Arg 155	Pro	Ala	Trp	Leu	Met 160	Ser	Glu	Thr	Leu	Arg 165
His	Leu	His	Thr	His 170	Phe	Gly	Ala	Asp	Tyr 175	Asp	Trp	Phe	Phe	Ile 180
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Glu	Glu	Phe	Ile	Gly 215	Ala	Gly	Glu	Gln	Ala 220	Arg	Tyr	Cys	His	Gly 225
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Ser	Ala	Phe	Ala	Val 305	His	Pro	Val	Ser	Glu 310	Gly	Thr	Leu	Met	Tyr 315
Arg	Leu	His	Lys	Arg 320	Phe	Ser	Ala	Leu	Glu 325	Leu	Glu	Arg	Ala	Tyr 330
Ser	Glu	Ile	Glu	Gln 335	Leu	Gln	Ala	Gln	Ile 340	Arg	Asn	Leu	Thr	Val 345
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Pro	Lys	Cys	Pro	Leu 395	Gln	Gly	Ala	Ser	Arg 400	Ala	Asp	Val ·	Gly	Asp 405
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Val	Asp	Thr	Leu	Phe 590	Phe	Leu	Thr	Thr	Val 595	Trp	Thr	Arg	Pro	Gly 600
Pro	Glu	Val	Leu	Asn 605	Arg	Cys	Arg	Met	Asn 610	Ala	Ile	Ser	Gly	Trp 615
Gln	Ala	Phe	Phe	Pro 620	Val	His	Phe	Gln	Glu 625	Phe	Asn	Pro	Ala	Leu 630

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Ala	Pro	Asn	Lys	Glu 50	Asp	Ile	Leu	Lys	Ile 55	Ser	Glu	Asp	Glu	Arg 60
Met	Glu	Leu	Ser	Lys 65	Ser	Phe	Arg	Val	T yr 70	Cys	Ile	Ile	Leu	Val 75
Lys	Pro	Lys	Asp	Val 80	Ser	Leu	Trp	Ala	Ala 85	Val	Lys	Glu	Thr	Trp 90
Thr	Lys	His	Cys	Asp 95	Lys	Ala	Glu	Phe	Phe 100	Ser	Ser	Glu	Asn	Val 105
Lys	Val	Phe	Glu	Ser 110	Ile	Asn	Met	Asp	Thr 115	Asn	Asp	Met	Trp	Leu 120
Met	Met	Arg	Lys	Ala 125	Tyr	Lys	Tyr	Ala	Phe 130	Asp	Lys	Tyr	Arg	Asp 135
Gln	Tyr	Asn	Trp	Phe 140	Phe	Leu	Ala	Arg	Pro 145	Thr	Thr	Phe	Ala	Ile 150
Ile	Glu	Asn	Leu	Lys 155	Tyr	Phe	Leu	Leu	Lys 160	Lys	Asp	Pro	Ser	Gln 165
Pro	Phe	Tyr	Leu	Gly 170	His	Thr	Ile	Lys	Ser 175	Gly	Asp	Leu	Glu	Tyr 180
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Cys	Leu	Lys	Tyr	Ala 230	Gly	Val	Phe	Ala	Glu 235	Asn	Ala	Glu	Asp	Ala 240
Asp	Gly	Lys	Asp	Val 245	Phe	Àsn	Thr	Lys	Ser 250	Val	Gly	Leu	Ser	Ile 255
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Asp .	Asn	Asp		• .					a	,				
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gaactgggaa tattttcaat ccagctgcta cttcttttct actgacacca 400
tttcctgggc gttaagttta aagaactgct cagccatggg ggctcacctg 450
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taaaatgaga gagtttttta ttggactgtc agaccaggtt gtcgagggtc 550

agtggcaatg ggtggacggc acacctttga caaagtctct gagcttctgg 600

gatgtagggg agcccaacaa catagctacc ctggaggact gtgccaccat 650

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Ile Leu Phe Leu Ser Ala Cys Phe Ile Thr Arg Cys Val Val Thr
35 40 45

Phe Arg Ile Phe Gln Thr Cys Asp Glu Lys Lys Phe Gln Leu Pro 50 55 60

Glu Asn Phe Thr Glu Leu Ser Cys Tyr Asn Tyr Gly Ser Gly Ser
65 70 75

Val Lys Asn Cys Cys Pro Leu Asn Trp Glu Tyr Phe Gln Ser Ser 80 85 90

Cys Tyr Phe Phe Ser Thr Asp Thr Ile Ser Trp Ala Leu Ser Leu
95 100 105

Lys Asn Cys Ser Ala Met Gly Ala His Leu Val Val Ile Asn Ser 110 115 120

Gln Glu Glu Gln Glu Phe Leu Ser Tyr Lys Lys Pro Lys Met Arg 125 130 135

Glu Phe Phe Ile Gly Leu Ser Asp Gln Val Val Glu Gly Gln Trp
140 145 150

Gln Trp Val Asp Gly Thr Pro Leu Thr Lys Ser Leu Ser Phe Trp
155 160 165

Asp Val Gly Glu Pro Asn Asn Ile Ala Thr Leu Glu Asp Cys Ala ·170 175 180

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 Thr Cys Phe Leu Asn Tyr Phe Arg Ile Cys Glu Met Val Gly Ile
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35 40 45

Phe Glu Ser Val Glu Leu Ser Cys Ile Ile Thr Asp Ser Gln Thr
50 55 60

Ser Asp Pro Arg Ile Glu Trp Lys Lys Ile Gln Asp Glu Gln Thr
65 70 75

Thr Tyr Val Phe Phe Asp Asn Lys Ile Gln Gly Asp Leu Ala Gly 80 85 90

Arg Ala Glu Ile Leu Gly Lys Thr Ser Leu Lys Ile Trp Asn Val 95 100 105

Thr Arg Arg Asp Ser Ala Leu Tyr Arg Cys Glu Val Val Ala Arg 110 115 120

Asn Asp Arg Lys Glu Ile Asp Glu Ile Val Ile Glu Leu Thr Val 125 130 135

Gln Val Lys Pro Val Thr Pro Val Cys Arg Val Pro Lys Ala Val 140 145 150

Pro Val Gly Lys Met Ala Thr Leu His Cys Gln Glu Ser Glu Gly
155 160 165

His Pro Arg Pro His Tyr Ser Trp Tyr Arg Asn Asp Val Pro Leu 170 175 180

Pro Thr Asp Ser Arg Ala Asn Pro Arg Phe Arg Asn Ser Ser Phe
185 190 190

His	Leu	Asn	Ser	Glu 200	Thr	Gly	Thr	Leu	Val 205	Phe	Thr	Ala	Val	His 210
Lys	Asp	Asp	Ser	Gly 215	Gln	Tyr	Tyr	Cys	Ile 220	Ala	Ser	Asn	Asp	Ala 225
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Asn	Ile	Gly	Gly	Ile 245	Ile	Gly	Gly	Val.	Leu 250	Val	Val	Leu	Ala	Val 255
Leu	Ala	Leu	Ile	Thr 260	Leu	Gly	Ile	Cys	Cys 265	Ala	Tyr	Arg	Arg	Gly 270
Tyr	Phe	Ile	Asn	Asn	Lys	Gln	Asp	Gly	Glu	Ser	Tyr	Lys	Asn	Pro
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Asp	Phe	Arg	His	Lys 305	Ser	Ser	Phe	Val	Ile 310					